

**“Dramatische taalvaardigheid”  
and how to remediate it**

**Developing and evaluating a remedial writing  
programme in a Dutch-medium secondary school**

**Adriaan D’Haens**

**A Research & Development Project**

**Submitted for the MSc Learning & Teaching 2020**

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# PREFACE

*close to overwhelming because of the abundance of information that needs to be considered, the variety of sometimes incompatible goals [I] would like to achieve, and behind all that, the spectral legions of questions not yet answered or even fully formed, the doubts, the inklings, the yearnings after something not yet identified*

Bereiter & Scardamalia (1987: 342) couldn't have put it any better: this is precisely how my research endeavour felt. At times enthralling, at times daunting but overall a truly enriching experience; allowing me to grow as a practitioner and a researcher.

I could not have foreseen at the start of it that this dissertation would see me through an unexpected succession of life's twists and turns, including losing a loved one, getting married, getting a new job on another continent and a global pandemic. It has been a remarkable journey, fusing professional development and personal growth.

Now that it is completely written up, I would like to extend a final word of thanks to:

My supervisor, for his exceptionally detailed yet highly motivating feedback

The management, teachers and pupils at my school for their cooperation

Ben, for his language advice

Lore, for her methodological help

Simon, for his statistics support

Jana Declercq, Lieve De Wachter, Catherine van Beuningen & Luuk van Waes for their academic input

My husband, for putting up with me throughout this (what at times seemed like a) never-ending story

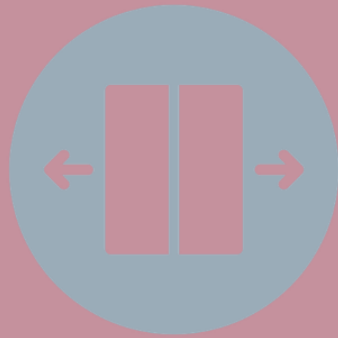


# ABSTRACT

This study is a piece of practitioner-research that investigates the impact of an intervention that incorporates a process-based view on writing and Self-Regulated Strategies Development. The participants were final-year pupils in a Dutch-medium school in Brussels, Belgium, with a multilingual background. Following the principles of action research, the project has taken a cyclical approach. In a first cycle, the available literature was surveyed to develop a fitting remedial writing programme. This was implemented during an additional weekly remedial lesson over a period of three weeks and consisted of small-group (4 pupils) need-based support and ad hoc modelling of strategic writing behaviour by the tutor. The assignment was a collaboration with the economics teacher, employing writing as a tool to learn. Analysis of the teacher diary and a focus group interview with the tutees found that the intervention lacked sufficient structure and that more explicit attention to metacognition was required. To overcome these shortcomings, in the second cycle, the acrostic OREO was introduced to incorporate explicit verbalisations of strategic behaviour at the level of the paragraph, the text and the writing process. Seven pupils received remediation following the OREO method and engaged in cross-curricular writing for two assignments, each consisting of three weeks of dedicated support for one period a week. A mixed methodology was used to assess the impact of the intervention on learners' writing proficiency (measured in terms of complexity, accuracy and fluency), self-efficacy and self-regulated strategy use when writing in Dutch. Data were collected via a survey, focus group, keystroke logging, stimulated recall and an interview pre- and post-treatment. No improvement in complexity and accuracy was found but fluency showed a positive trend in all tutees for whom keystroke logging data were available (n: 4). Pupils reported increased self-efficacy in the focus group and an increase in strategy use was observed in the stimulated recall and interview, though these changes were not visible in the quantitative data. The study concludes that the school's envisaged aim for remediation -being tailor-made support for pupils' individual language issues- is difficult to reconcile with the heterogeneity of the class-group. It also indicates that the school is not sufficiently aware of these discrepancies in pupils' proficiency, in the absence of any form of standardized or benchmarked testing, and hence does not have a clear idea of which pupils are in need of extra support. Accordingly, a call for further research establishing a normative database for proficiency measures, including for multilingual learners, is made. The findings indicate that the strategies included in the OREO approach and its use of writing as a tool to learn in other subjects can fill a lacuna that is currently present in the teaching of writing both in the language classroom and in other subjects. Further research for more extended periods of time, with more participants and a control group is now advised, to further explore how an intervention of this kind can impact the writing of adolescent multilingual learners.

# GLOSSARY & LIST OF ABBREVIATIONS

Dutch	(1) the language spoken in Flanders, the northern part of Belgium (where it is also colloquially referred to as Flemish, although the correct term is Belgian Dutch), the Netherlands and Suriname, endonym: Nederlands (2) the adjective to refer to the Kingdom of the Netherlands
Flemish	(1) the adjective referring to the northern part of Belgium, Flanders (2) the colloquial term for the variety of Dutch spoken in Flanders
L1	first language, i.e. the dominant language of an individual
L2	second language, i.e. when a learner learns a language in an area where it is spoken as a first language
FL	foreign language, i.e. when a learner learns a language in an area where it is not spoken as a first language
NOB	Nederlandstalig Onderwijs in Brussel (Dutch-speaking education in Brussels)
OVUR	Orienteren, Verwerken, Uitvoeren, Reflecteren; Orienting, Processing, Executing, Reflecting; a mnemonic commonly used to teach productive language tasks in Flanders
SAN	Schrijfhulp Academisch Nederlands, a digital writing aid by the Catholic University of Louvain
S-E	self-efficacy
SR	stimulated recall
SRSD	Self-Regulated Strategy Development
Wallonia	the French-speaking part of Belgium, adjective: Walloon



# INTRODUCTION

---

# 1 INTRODUCTION

*Dramatische taalvaardigheid*<sup>1</sup>, my colleague's subject line read. He had been correcting writing assignments and was at his wit's end: the pupils' mistakes were basic and seemed impossible to eradicate. His e-mail to the teaching staff was quickly followed by a host of replies showing a resounding sense of recognition. The fact that a majority of the pupils at our school have a different mother tongue from the language of instruction, Dutch, makes writing particularly challenging for many of them.

The ideal thesis subject had just been delivered to my mailbox: I identified strongly with these concerns and an exploratory glimpse at the literature showed promising avenues for remedial interventions as well as the need for more research. On top of this, I sensed many colleagues shared my enthusiasm and curiosity.

The Flemish educational system does not have standardized tests at any stage, so there is a lack of data on writing proficiency for both our school and the system as a whole. Participation in a research project on the comparative assessment of writing skills (Coertjens et al. 2017) did show that our pupils score well below their Flemish peers, however. This is in line with research that shows pupils who do not speak the language of instruction at home, as is the case for 57% of our pupils, puts them at heightened risk of developing literacy problems, with the complexity of academic language impeding the development of higher-level literacy (Scarcella 2002).

---

<sup>1</sup> *Dramatic language proficiency*

Although the *lack of proficiency* in writing may be particularly strong at our school because of our demographic, the struggle with writing is one that is widespread in schools in the Dutch language community. In its 2015 report on writing proficiency in education, the Dutch Language Union reports a general sense of worry with educators (Werkgroep Schrijfvaardigheid 2015). Moreover, literacy in general is a growing source of concern in Flanders. The most recent results from the *Progress in International Reading Literacy Study* show reading skills in primary pupils are in decline (De Fraine & Van Damme 2017) and the poor quality of student writing has been raised as a problem by educators in higher education (De Moor & Colpaert 2019).

Additionally, the Flemish inspection criticizes the *teaching* of writing, stating pupils are not given sufficient opportunities to write and are insufficiently being equipped with writing strategies, i.e. knowledge of how to approach the writing of a text (Ministerie van Onderwijs 2009, 2012, 2014). This echoes a more wide-spread criticism that writing instruction is often lacking in quality (Graham & Perin 2007c, Rogers & Graham 2008).

Although the field of *literacy research* has been receiving unprecedented attention (Christie & Derewianka 2008), research on writing is still lagging behind reading research (Graham & Perin 2007b, 2007c). More specifically, there is a call for more research on writing in secondary schools (Juzwik & al 2006, Christie & Derewianka 2008) and with multilingual learners (Graham & Perin 2007b, Juzwik & al 2006).

The need for well-developed *proficiency* in writing, sound *teaching* and further *research* to facilitate this becomes particularly pressing when taking into account the overwhelming importance of writing in education, the job market and society at large (Zimmerman & Risemberg 1997). Good writing skills are essential for academic success, with writing proficiency predicting overall scholastic performance (De Wachter et al. 2013, Graham 2006). Furthermore, pupils who lack literacy skills are in danger of dropping out of high school because they lack basic literacy skills to meet the growing demands of

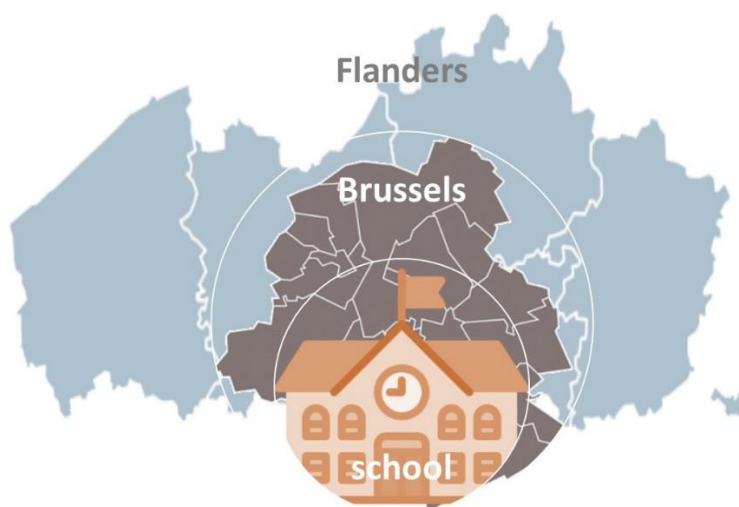
the high school curriculum (Biancarosa & Snow 2006). Moreover, writing is an indispensable asset in the knowledge economy (Brandt 2005), with Brandt (2009: 117) condensing its uniqueness as follows: "The human skills of literacy make the knowledge economy viable. Writers put knowledge in tangible, and thereby transactional, form.". The demand for written communication has never been higher (Juzwik et al. 2006), to the extent that adults who do not possess sufficient writing skills may struggle to participate fully in civic life (Graham & Perin 2007a) or miss out on employment opportunities and promotions (National Commission on Writing 2004).

This introduction has established that my intervention addresses a critical challenge for the school. It has embedded this issue in a broader framework and found that intervention-based research on writing remediation is warranted in several ways. It was shown that literacy in Flemish pupils is a general source of concern and that the approach to teaching writing is often not sufficiently effective. The research base is substantial, but there is a call for further research in precisely those areas my research will focus on, i.e. secondary school settings and multilingual learners. Finally, the ability to express oneself in writing has been put forward as a key to academic and professional success. The next chapter will now explore the research context to identify any variables that should be taken into account when designing the intervention.

## 2 RESEARCH CONTEXT

### 2.1 INTRODUCTION

My research took place in a secondary school where Dutch is the medium of instruction, located in Brussels, the capital of Belgium (Figure 1). I will discuss the particularities of the school set within concentric spheres of influence (Figure 2), viz. Brussels and Flanders .



*Figure 2 Concentric spheres of influence of school context*



## 2.2 FLANDERS

Education in Belgium falls within the jurisdiction of the different language communities that make up the country, i.e. Dutch-, French- and German-speaking (Figure 3). Accordingly, the Flemish Ministry of Education is responsible for the organisation of schooling in Flanders. Every school is part of one of three umbrella organisations, which act as an intermediary between the school and the government by providing support in curriculum development to attain the centrally-set attainment targets (OECD 2015). In secondary school, pupils have a choice between four tiers, viz. general, technical, artistic and vocational (Boone & Van Houtte 2013) (Figure 4).



*Figure 3 Belgian language communities (Education in Belgium n.d.)*

The figure originally presented here cannot be made freely available via ORA because of copyright. The figure was sourced at Boone, S., & Van Houtte, M. (2013) In Search of the Mechanisms Conducive to Class Differentials in Educational Choice: A Mixed Method Research. *The Sociological Review*, 61 (3), 549-572.



### 2.3 BRUSSELS

The Capital Region of Brussels has 1,208,542 inhabitants (Statbel 2020) and is officially bilingual (French and Dutch). In spite of this bilingual status, there are no officially bilingual schools as schools are part of either the Flemish or the Walloon educational system. Hence, they follow the curriculum and attainment targets that are set at the Flemish or Walloon level (Janssens et al. 2009). According to the latest figures (Sacco et al. 2016), Dutch-language schools account for 15% of all students in secondary school in Brussels and 85% of pupils are enrolled in French-language education. Traditionally, Dutch speaking schools catered to the educational needs of Dutch speaking families, with 76.5% of children coming from homogenously Dutch-speaking families in 1991-1992. Demographic evolutions have caused the number of pupils from such families to decline drastically to 18.7% in '17-'18 (VGC 2018).

With only 5.6% of the Brussels' population living in a monolingual Dutch family and three times that number enrolled in Dutch-speaking education, it is clear that the Dutch-speaking schools are attracting a wider audience. Two reasons can account for this: on the one hand the perception that the Flemish education system is of a higher quality (Hemmerechts & Kavadias 2017) and on the other hand the parents' desire for their children to grow up bilingual (Van Mensel 2007). Finally, it should be noted that, with the Dutch-speaking minority being so small and French most commonly used as a lingua franca (Janssens 2013), Brussels is predominantly French-speaking in practice. This gives rise to a peculiar situation in the Dutch-speaking schools of Brussels: a majority of pupils do not speak Dutch at home and little Dutch outside of school. For their schooling, however, they are treated as if they were native speakers living in a Dutch-speaking environment, as there are no official accommodations to their multilingual background. Pupils who graduate in this system who are not Dutch-speaking at home have often acquired near-native proficiency (albeit at times flawed) and hence cannot be classified as L1 or L2 users. I would argue the Dutch language proficiency of these

pupils can be labelled *L1½*, as it shares features with both L1 proficiency (pupils generally speak it effortlessly and have all the vocabulary they need to function in a Dutch-speaking environment) and L2 proficiency (lexical lacunas and grammatical flaws). It is particularly the more academic use of language they find challenging. This ties in with Cummins' (1979) distinction between Basic Interpersonal Communicative Skills (BICS) and Cognitive Academic Language Proficiency (CALP), with pupils who do not speak the language of instruction as their mother tongue typically struggling with the latter (see Cummins 2008 for an overview).



## 2.4 SCHOOL

The school in which this research was conducted is located in a residential part of Brussels. It is a Dutch-speaking school and has 962 pupils on roll (Dataloep 2020) in the general education tier. Schools of this type prepare pupils for higher education and do so offering a number of programmes focusing on different strands of the curriculum (i.e. modern languages, economics, science, humanities, classics, sports and mathematics) (Onderwijskiezer 2020). Being one of the most popular schools in Brussels, it is well-reputed and known for its dedicated learning support (Bruzz 2016). It attracts pupils from a variety of backgrounds but a majority of parents are highly educated (Galle 2017). 14.1% of pupils qualify for a pupil premium<sup>2</sup>, less than half of the average of general education schools in Brussels (Dataloep 2020). French (38%) and Dutch (24%) are the most commonly-spoken languages at home; slightly more than half of all pupils do not speak any Dutch at home. The staff are generally motivated and share a sense of pride in being part of the school community

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<sup>2</sup> The Flemish pupil premium consists of extra teaching periods that are allocated to schools based on the number of pupils that meet criteria that put them at risk of underperforming (e.g. mother does not speak Dutch or has not finished secondary education).

(Onderwijsinspectie 2013). In order to bolster its position as one of the top schools in Brussels, the demands on teachers are great, however, and teachers have indicated they experience the workload as high (IDEWE 2014). Figure 5 on the following page visualizes the major school characteristics.

## **2.5 CONCLUSION**

This section has provided the reader with the background needed to engage in the further reading of this thesis. In particular, the reader should note the idiosyncratic linguistic situation: pupils' multilingual background must be taken into account when devising the theoretical framework for the intervention. To be more specific, attention will have to be paid to the extent to which L2 writing is different from writing in one's mother tongue. Before we turn to the literature to address this, the following section will explain how this dissertation will follow the principles of action research and will provide an exploratory stakeholder analysis.

# SCHOOL FACT SHEET

URBAN SETTING



PART OF THE DUTCH-SPEAKING SCHOOLS OF BRUSSELS ORGANISED BY THE FLEMISH GOVERNMENT



GENERAL EDUCATION PREPARING FOR HIGHER EDUCATION ALL STRANDS ARE OFFERED



14% OF PUPILS ENTITLED TO PUPIL PREMIUM

962

PUPILS



PREDOMINANTLY MIDDLE CLASS HIGHLY EDUCATED PARENTS



22

NATIONALITIES

90% BELGIAN



38%



24%



19%



19%

36

LANGUAGES



ONE OF THE BEST REPUTED & MOST POPULAR DUTCH-SPEAKING SCHOOLS IN BRUSSELS



# FIRST CYCLE

## EXPLORATION

---



LITERATURE REVIEW

FOCUS GROUPS &  
INTERVIEWS



DIDACTIC PILOT

3 remedial classes  
+ reading & feedback session

TEACHER-RESEARCHER DIARY



CHARTING THE TERRITORY

---

### 3 INTRODUCTION TO THE FIRST CYCLE

This research project wants to provide a scientifically sound answer to a question that is rooted in teaching practice. Approaching it through action research –a paradigm essentially concerned with improving educational action through academic research (Baumfield, Hall & Wall 2013)- is hence a sensible way forward. It serves as a tool for empowerment and emancipation for the teacher-researcher by seeing teaching practice no longer as secondary to theory but rather as that which validates it (McAteer 2013).

As part of its emancipatory potential, action research provides teachers with protocols to ensure the robustness and integrity of their research project. McAteer (2013) lists Kemmis & McTaggart’s (1981) four-step approach which breaks down the research project into consecutive stages of *planning, acting, observing* and *reflecting* (Figure 6). She further establishes that these stages typically form part of an *iterative* approach in which the results of one cycle inform the next.



Figure 6 Four-step approach in action research

Applied to my research, this four-step, cyclical approach will take the following form; this information is also represented graphically in Figure 7.

- A *first cycle* will be more *exploratory* in nature: it will consist of developing an intervention and organising a small-scale test to get a sense of the feasibility and usability.
- A *second cycle* will take into account the findings from this exploration, allowing me to adjust the intervention and *implement* it, using rigorous pre- and post-testing to assess its impact.

To *plan* the intervention, the next chapter will now chart the territory by analysing the needs of the principal stakeholders.

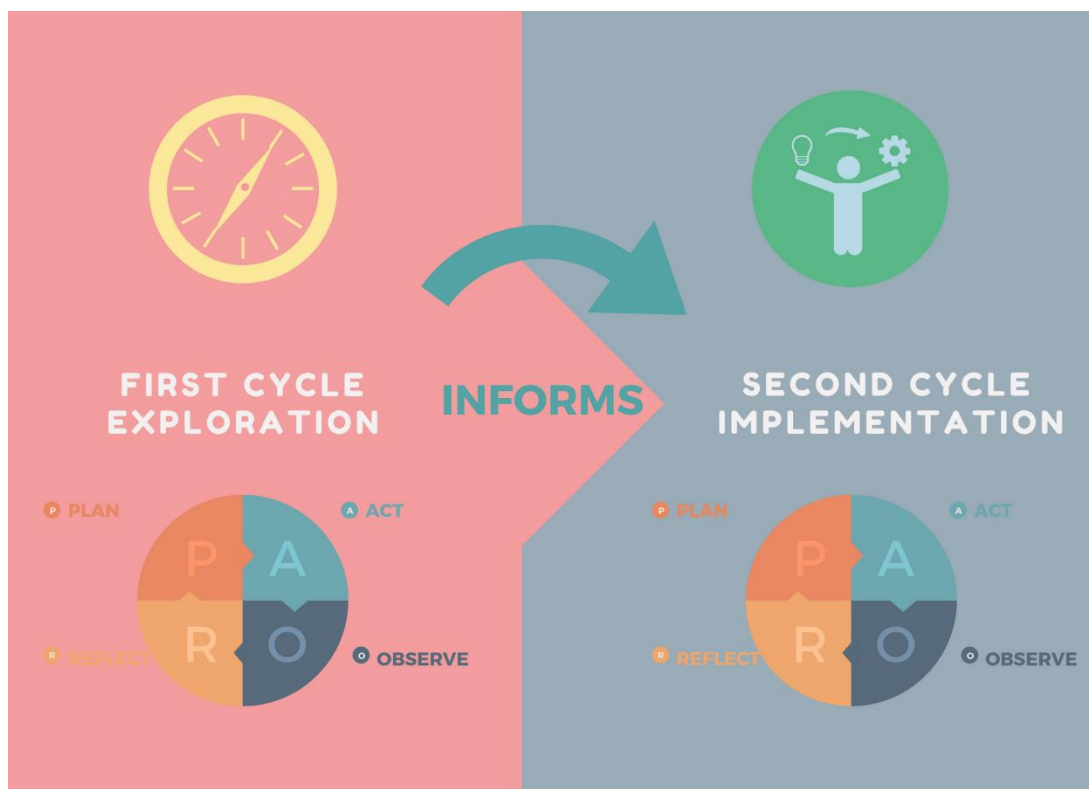


Figure 7 Cyclic nature of my research project

## 4 CHARTING THE TERRITORY

### 4.1 HOW IS WRITING CURRENTLY BEING REMEDIATED AT THE SCHOOL? – AN EXPLORATORY STAKEHOLDER ANALYSIS

To map the needs of the different stakeholders (Figure 8) regarding the remediation of problems with Dutch and Dutch writing in particular, I organised exploratory semi-structured interviews and a focus group. For space reasons, I would like to refer the reader to the chapter on methodology (9.3.2 Focus group) for a full discussion of these methods.

Participants were selected as follows:

- The management team was interviewed as a whole.
- Individual interviews were carried out with a Dutch teacher from every cycle<sup>3</sup> and the two remedial Dutch teachers.
- A focus group was organized with four pupils from the final year of the economics strand, a strand with one extra period of remedial Dutch. They were selected by their teacher because their marks for writing were low. I decided to interview pupils in the final year because they had been at the school the longest and hence had the most experience with the teaching of (remedial) Dutch.

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<sup>3</sup> Flemish secondary education consists of three two-year cycles

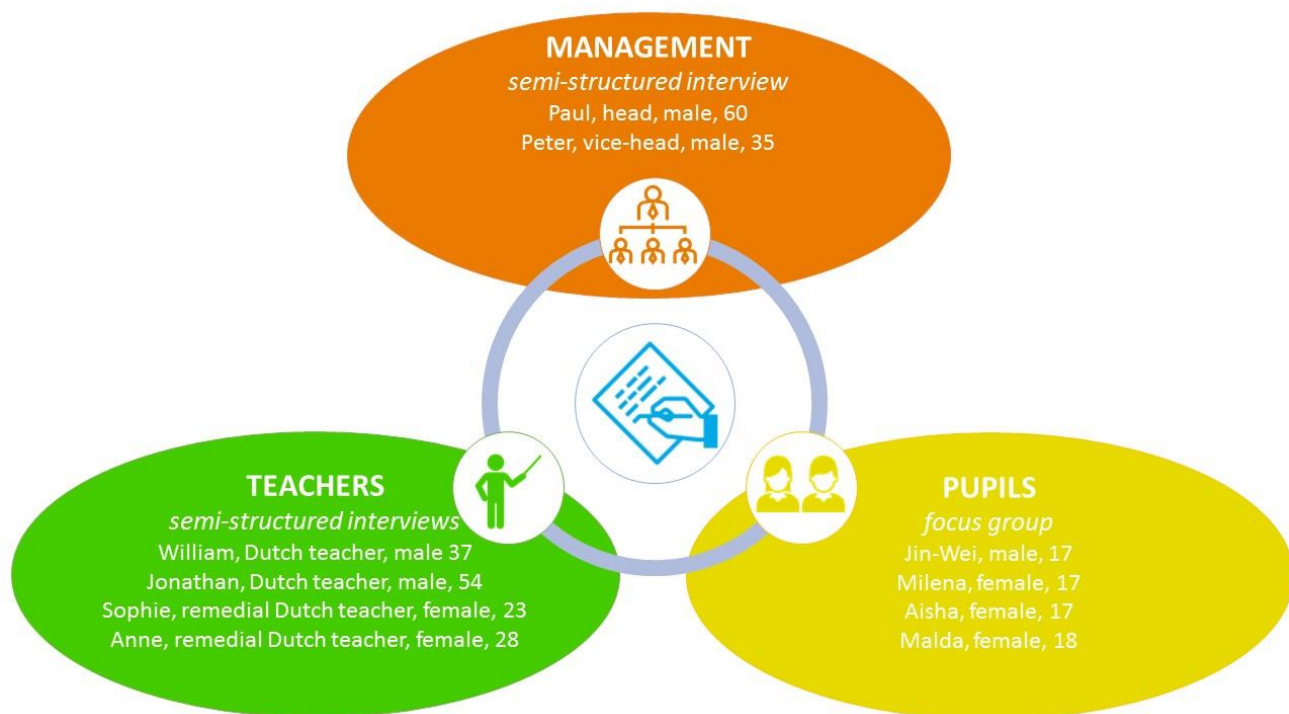


Figure 8 Stakeholder analysis

#### 4.1.1 THE PERSPECTIVE OF THE MANAGEMENT



The interview with the senior leaders revealed that the school has taken several initiatives in the past to improve pupils' Dutch. Traditionally extra support was only timetabled in the first two years, but seven years ago one extra period of Dutch was added to the programme of the two strands that traditionally have the highest number of non-native speakers (humanities and economics) for all year groups in the second and third cycle. This was done at the request of the individual Dutch teacher at the time and no specific instructions as to the type of teaching were given apart from that "they should cater to the needs of their pupils" (Paul). The head's expectation of the writing instruction at the school is that "pupils should be enabled to express themselves correctly in writing".

#### 4.1.2 THE PERSPECTIVE OF THE TEACHERS



The approach to teaching writing differs significantly between teachers. Jonathan and Sophie repeatedly refer to the importance of spelling and grammar, whereas Anne focuses on the content

dimension and the how-to, she sees equipping pupils with good writing skills as crucial to their preparation for higher education. Sophie, who is the most junior Dutch teacher on the team, feels her writing classes tend to focus too much on the product and do not sufficiently entail opportunities for interim feedback or rewriting.

The remedial teachers indicate that they are free to design the remedial programme (which consists of an extra period of Dutch in addition to the standard number of four) as they wish but acknowledge that the extra time is mostly used for teaching the regular syllabus as the pupils' low level of language proficiency causes them to lag behind. Additionally, Sophie, who teaches the economics strand, mentions that pupils in this programme typically require more classroom management, which contributes to the loss of teaching efficiency.



#### 4.1.3 THE PERSPECTIVE OF THE PUPILS

The pupils are displeased with the current remediation, as the extra period is used to teach the regular course. They feel their Dutch course should be taught in the standard four periods and would much "rather have an extra free" (Jin-Wei). Jin-Wei thinks remediation should focus on their individual needs and the large size of their class-group is deemed to have an adverse effect on their learning. The fact "they do not see any progress" (Aisha) is a source of frustration. They do not have a clear idea of what form the remedial Dutch (writing) classes should take but do feel that a good command of Dutch is important.

## 4.2 CONCLUSION

A number of relevant issues surfaced during the stakeholder analysis. On the one hand, it has flagged up more practical dimensions that will inform the design of my intervention. The remediation as it is being organized in the extra remedial period in the second and third cycle in the economics and humanities strand is currently not effective. It follows that my intervention can be of value by

developing remediation for precisely this period. On the other hand, this section has further illustrated the need for a general examination of how to best teach writing to respond to the pupils' lack of progress.

# 5 LITERATURE REVIEW

## 5.1 INTRODUCTION

This literature review will first explore what writing *is* and how it *works*. This is to offer a comprehensive theoretical background before turning to literature on how it should be *taught*. As such, it brings together academic and applied research as well as policy to ensure a holistic understanding. Finally, a reflection will be made on the applicability of theories on L1 writing in an L2/FL setting.

## 5.2 WHAT IS WRITING? – A DEFINITION

The Cambridge textbook on writing systems (Coulmas 2003: 1) defines writing as “a system of recording language by means of visible or tactile marks” and subsequently “the activity of putting such a system to use”. Hayes (1996: 5) further qualifies it as “a communicative act that requires a social context and a medium”, “a generative activity requiring motivation” and “an intellectual activity requiring cognitive processes”. Indeed, the literature on writing reflects this triadic conceptualisation, with the different models under scrutiny in this section approaching writing as a *socially embedded communicative practice* rooted in *cognitive processes* and influenced by *affect and motivation*.

## 5.3 HOW DOES WRITING WORK? – AN OVERVIEW OF WRITING THEORIES

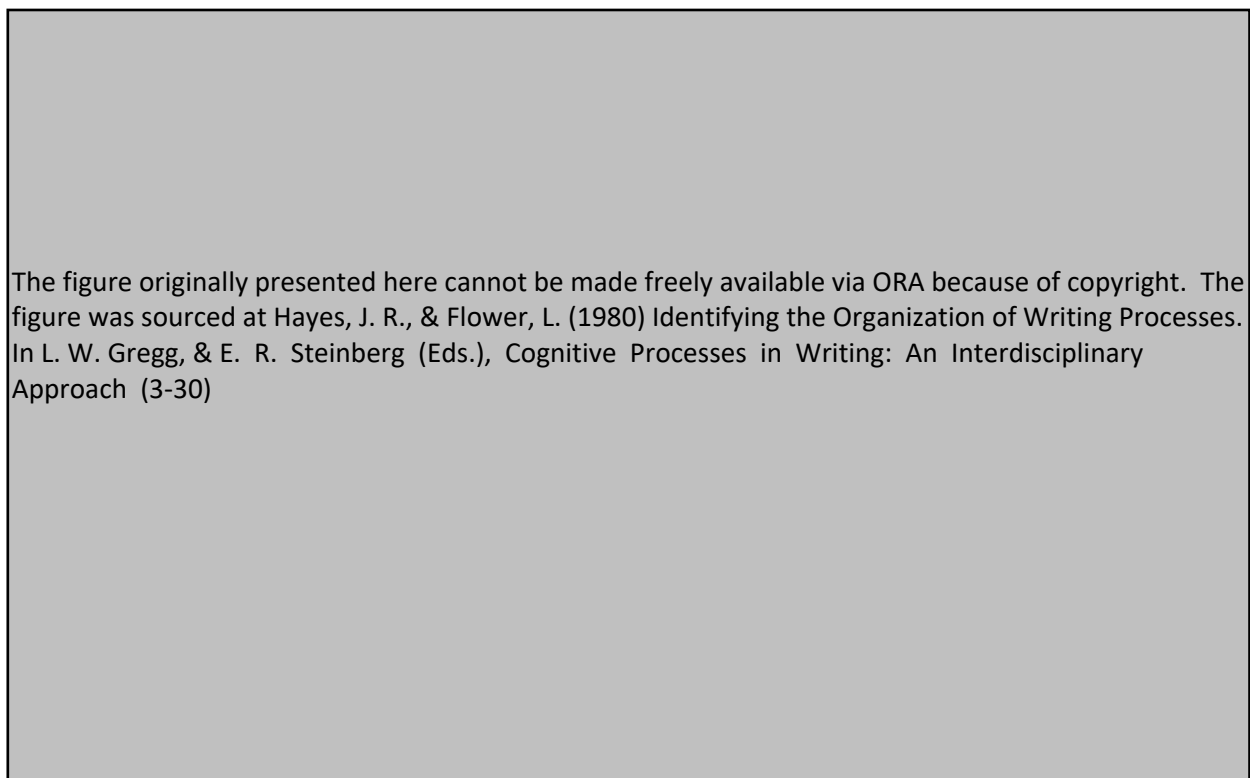
In this section I present the most influential theories on how writing works. They are discussed in chronological order and the decision on what models to include was inspired by MacArthur & Graham (2016), the most recent and most comprehensive handbook on writing research. In a first stage they

are presented as theoretic models; their relevance for didactic practice will be made clear in the subsequent section on how writing should be taught.

### 5.3.1 HAYES AND FLOWER (1980)

Dubbed “the most influential cognitive model of writing to this point in time” (MacArthur & Graham 2016: 26), Hayes and Flower’s (1980) model breaks down writing into three components including three different stages within the writing process and a subset of recursive processes.

Hayes and Flower (1980: 11) propose three major parts in the writing process, as represented in Figure 9: the task environment, the writer’s long-term memory and the writing process.



Two components are proposed in addition to the actual writing process. First, the *task environment* consists of “everything outside the writer’s skin that influences the performance of the task” (Hayes & Flower 1980: 12). As such, it includes the assignment, the setting it is carried out in and the text itself once the writer starts to write. Second, the writer’s *long-term memory* subsumes knowledge

of the topic and the audience and any generalized writing plans she might have. The latter refers to formulae writers can bring to the table, such as a structure based on wh-questions.

The most elaborate part of Hayes and Flower's model is the writing process, which comprises *planning*, *translating* and *reviewing*. Hayes and Flower develop these major stages further to elucidate their complex nature.

When *planning*, writers go through a subprocess of *generating* in which they draw on information about the topic and the parameters of the writing task (e.g. intended audience) from their long-term memory. They then go on to *organize* the topic information they generated by applying an appropriate structure. Parallel to this, considerations regarding the task are used for *goal setting*. For instance, insights that were generated about the intended audience are translated into goals for text clarity or register. These goals will function as criteria in the editing stage. In the subsequent *translating* stage, the material from the planning stage is put into words. Finally, two subprocesses are identified in the *reviewing* stage: *reading* and *editing*, including correction where necessary. To coordinate the different writing processes, a *monitor* is posited as an executive entity that decides on the course of action. It is important to note that the seemingly linear structure of the writing process as it is outlined here is a way to introduce the model in a logical fashion. Hayes and Flower do emphasize, however, that their model is *recursive* in nature.

### 5.3.2 HAYES (1996)

In 1996 Hayes suggested a revised version of the model he drew up with Flower. As figure 10 shows, the new model is set up dyadically, grouping variables under either task environment or the individual. It no longer features the processes (planning, translating, reviewing) from the 1980 model but is framed in terms of cognition and affect. Apart from a major reorganization it features three important additions.

The figure originally presented here cannot be made freely available via ORA because of copyright. The figure was sourced at Hayes, J. R. (1996) A new framework for understanding cognition and affect in writing. In C. M. Levy & S. Ransdell (Eds.), *The science of writing: Theories, methods, individual differences, and applications* (1-27). Hillsdale, NJ, US: Lawrence Erlbaum Associates, Inc.

First, language being “primarily a social activity” (Hayes 1996: 5), the task environment sees the addition of the *social environment*, comprising both *audience* and *collaborators*. Secondly, on the part of the individual, substantial attention is devoted to the role of *working memory*. Drawing on Baddeley (1986), working memory is structured as *phonological memory*, likened to an inner voice and a *visual-spatial sketchpad*, responsible for the graphic side of writing. Hayes supplements these types of memory with a *semantic* one, the whole being managed by a *central executive*. Finally, in line with an increased awareness of the role of affect on language use in social psychology (e.g. Gardner 1985) *motivation* and *affect* are afforded a place in the revised model.

### 5.3.3 BEREITER AND SCARDAMALIA (1987)

Bereiter & Scardamalia continue the integration of writing research in “the cognitive science enterprise” (1987: X). In *The Psychology of Written Composition*, they investigate the cognitive processes behind writing by introducing the binary concepts of *knowledge-telling* and *knowledge-transforming*. These two modes of writing correspond to the dual nature of writing as both *natural*, performed effortlessly, and *problematic*, through deliberate effort. *Knowledge-telling* can be conceived of as a way of writing which “preserves the straight-ahead form of oral language production” (1987: 9) and, accordingly, is an efficient way for novice writers to communicate. *Knowledge-transforming*, on the other hand, is linked to the writing practice of expert writers. It transforms knowledge by employing writing as a strategically controlled tool in the reciprocal creation of text and content. As such, it forms “the basis for reflective thought in writing [...] in which the thoughts come into existence through the composing process itself, beginning as inchoate entities (“dribbles”) and gradually, by dint of much rethinking and restating, taking the form of fully developed thoughts” (1987: 9-10).

Another feature of Bereiter and Scardamalia’s mapping of the writing process is the role of *strategies* in the writing process. They discern two types: *rhetorical* and *self-regulatory*. The former refers to strategies writers employ for rhetorical effect (e.g. how to start a narrative) and have traditionally been the domain of rhetoric and the study of composition. The latter is defined as “strategies for managing one’s own cognitive behaviour during writing” (1987: 249) and include checking a text for clear pronoun reference or using knowledge-telling when composing. Self-regulatory strategies presuppose sufficient metacognitive insight and an extant central executive strategy that is sufficiently advanced for other strategies to be embedded into it. Building on the work of Brown and Campione (1981), the authors mention checking, planning, monitoring, revising, evaluating as instances of “self-regulatory mechanisms” and acknowledge that these “building blocks” of self-regulatory mechanisms are indebted to the Hayes and Flower (1980) model.

Last, at the heart of Bereiter and Scardamalia's work is a focus on *educational implications*. They feel writing often does not get the teaching it deserves and that educators fail to take advantage of children's natural eagerness to write. Writing should be a *meaningful* undertaking for pupils, because they feel personally involved or want to use it as a tool to develop complex thought. The assertion is made that mature writers master the skill of making writing meaningful and this skill should be instilled in the novice writer. Bereiter and Scardamalia further advocate the use of *procedural facilitation* in the form of "simplified routines and external supports" (1987: 363), *modelling by the teacher* and *clear goal setting*. Finally, Bereiter and Scardamalia feel that schooling in general is too often reductive; this is where knowledge-transforming has a role to play, as a means to engage with content issues through language and conversely develop language by using it as a tool for content exploration.

#### 5.3.4 ZIMMERMAN AND RISEMBERG (1997)

Zimmerman and Risemberg's (1997) principal contribution to the theorizing of writing hinges on the role of *self-regulatory strategies* and *self-efficacy* in writing. Their theory is embedded in a *social cognitive framework* as advanced by Bandura in 1986, which assumes that personal, behavioural and biological (environmental) factors influence each other reciprocally in a model of "triadic reciprocal causation" (Bandura 1986: 24). Drawing on previous work by Zimmerman and Schunk (1989) and Zimmerman (1989) on academic self-regulation, Zimmerman and Risemberg define self-regulation in writing as "the application of self-initiated thoughts, feelings and actions that writers use to attain various literary goals, including improving their writing skills as well as enhancing the quality of the text they create" (1997: 76).

The figure originally presented here cannot be made freely available via ORA because of copyright. The figure was sourced at Zimmerman, B. J., & Risemberg, R. (1997) *Becoming a Self-Regulated Writer: A Social Cognitive Perspective*. *Contemporary Educational Psychology*, 22 (1), 73–101.

Figure 11 outlines this process, with the three types of self-regulatory behaviour being intricately connected and including *covert* (individual) *self-regulation* (e.g. goal setting), *behavioural self-regulation* (e.g. monitoring behaviour by keeping a record) and *environmental self-regulation* (all strategies regarding the selection and interaction with one's physical and social environment such as finding a quiet place to write or getting help from a teacher). Summarizing, the self-regulatory strategy-oriented approach to writing put forward by Zimmerman and Risemberg encompasses the cognitive self-regulation already present in Bereiter & Scardamalia and expands on it with a behavioural and environmental/social component.

Finally, Zimmerman & Risemberg establish a close connection between the triadic self-regulatory system and perceptions of *self-efficacy*, defined in Bandura's seminal paper as "the conviction that one can successfully execute the behaviour required to produce the outcomes" (1977: 193). They assert a reciprocal relationship between self-efficacy beliefs and self-regulation. On the one hand, learners who acquire suitable self-regulatory strategies will increase their perception of self-efficacy. On the other hand, the level of self-efficacy is hypothesized to be predictive of levels of self-regulation and ultimately proficiency in writing. Ample evidence is quoted to corroborate both claims,

an extensive list can be found in Zimmerman & Risemberg (1997: 80) and in Pajares (2003). A more recent overview of the impact of self-efficacy beliefs on writing proficiency is offered by Bruning & Kauffman (2016), who conclude that "[e]ducational practices should be gauged not only by the skills and knowledge they impart for present use, but also by what they do to children's beliefs about their capabilities" (2016: 166).

### 5.3.5 CONCLUSION

The aim of this chapter so far has been to offer a panoramic overview of the theory that acts as a backdrop for didactic approaches to writing. It allows us to develop an understanding of trends in writing research and how successive models are indebted to prior theorizing.

## 5.4 HOW SHOULD WRITING BE TAUGHT? – A DISCUSSION OF EVIDENCE-BASED PRACTICES AND POLICY GUIDELINES

With the insights from section 5.3 on *how writing works*, we now turn to *how it should be taught*. For this, I draw on three different types of sources: academic studies aimed at collecting evidence-based practices, professional literature disseminating this knowledge and policy guidelines for Flemish education. An in-depth discussion of how these resources were selected is available in Appendix A. This is not essential reading for a good understanding of this thesis, but is offered as proof of the careful consideration that went into the selection of sources.

In the research context section I characterized the school as one that puts academic learning centre stage. The stakeholder analysis has further shown that there is a sense of frustration with pupils about the current remedial teaching approach and about their feeling of making little progress. Additionally, many of the pupils in the classes that have an extra period of Dutch remediation typically show forms of maladaptive academic behaviour. With these considerations in mind, two promising foundations for my intervention present themselves: the *process approach to writing* (Graham & Sandmel 2011) and

the *use of self-regulated strategies* (Harris & Graham 2016). These are considered the most successful and all-encompassing interventions in the teaching of writing (Graham & Perin 2007b) and feature particular attention to the behavioural and attitudinal dimension in writing and learning in general. A third approach that will be integrated into the intervention is cross-curricular writing, referred to in the literature as *writing-to-learn*; the use of writing as a tool for content learning tying in with the school's academic profile. Below, I will outline each of these approaches in turn.

#### 5.4.1 PROCESS WRITING APPROACH

The principles behind the process writing approach can be described as follows:

When writing, students are expected to:

- engage in cycles of planning (setting goals, generating ideas, organizing ideas), translating (putting a writing plan into action), and reviewing (evaluating, editing, revising)
- write for real purposes and audiences, with some of their writing projects occurring over an extended period of time
- take ownership
- reflect and evaluate
- work together collaboratively

The role of teachers is to

- create extended opportunities for writing
- create a supportive and non-threatening writing environment
- provide individualized writing instruction

(Graham & Sandmel (2011: 396-397), Graham & Perin (2007a: 19)

Clearly the main tenet, the cyclical approach, is indebted to Hayes & Flower (1980). The importance of writing for a real audience, then, mirrors Hayes' (1996) attention to the social environment and the attention for goal setting is in line with the didactic implications of Bereiter & Scardamalia's (1987)

model. Further, the fostering of a writer-friendly environment and ownership echoes the attention for motivation and affect present in Hayes's model and Bereiter & Scardamalia's as well as the importance Bereiter & Scardamalia attach to self-efficacy in writing.

Looking at policy prescriptions for the teaching of writing, we notice how the cyclical approach to writing occupies a prominent place in the curriculum for Dutch. It literally states that "[s]chrijven is een cyclisch proces"<sup>4</sup> (GO! Onderwijs van de Vlaamse Gemeenschap 2014: 24) of which the product is just one part, and advocates the OVUR-approach to writing. This mnemonic breaks down the writing process into *Oriënteren*, *Verwerken*, *Uitvoeren* and *Reflecteren*<sup>5</sup>, paralleling Hayes & Flower's (1980) planning, translating and reviewing. This technique is used for all productive language tasks from the first to the final year of secondary school.

Graham & Perin (2007a, 2007c) suggest enriching the process approach with strategy instruction to arrive at a way of teaching writing which is beneficial to struggling writers and cite evidence of studies that have been successful at this (Curry 1997, MacArthur et al. 1991). The next section will discuss this method.

#### 5.4.2 SELF-REGULATED STRATEGY DEVELOPMENT

One of the most pervasive definitions (Pressley & Harris 2009) of what exactly a strategy is comes from Pressley & al. (1985: 4):

A strategy is composed of cognitive operations over and above the processes that are natural consequences of carrying out the task, ranging from one such operation to a sequence of interdependent operations. Strategies achieve cognitive purposes (e.g. comprehending, memorizing) and are potentially conscious and controllable activities.

---

<sup>4</sup> Writing is a cyclical process

<sup>5</sup> Orienting, Processing, Executing and Reflecting

The strategy-based approach that is put forward by Graham & Perin (2007a, b) as the most efficient in writing instruction is known as Self-Regulated Strategy Development (SRSD). It has the highest effect size (0.82) out of all interventions in Graham & Perin's meta-analysis of writing instruction for adolescent students (2007b) and a substantial research base on its merit has developed (see Santangelo et al. 2016 for an overview), establishing its potential to increase content knowledge, strategy use, self-regulated behaviour, self-efficacy and motivation in pupils of wide range of ages and ability (Santangelo et al. 2007).

The precise nature of SRSD remains hard to pin down, however. Harris & Graham (2016: 80) propose the following characteristics:

interactive, discourse based, scaffolded, explicit learning of genre knowledge and strategies for genre-specific and general writing, the knowledge (such as vocabulary and background knowledge) needed to use these strategies, and strategies for self-regulating strategy use and writing behavior (e.g., goal setting, self-assessment, self-instructions, and self-reinforcement)

Instruction typically takes places in six stages, starting with explicit instruction and running through modelling to independent performance. Drawing on Harris (1985) and Harris & Graham (1992), I will further synthesize the nature and appeal of this treatment. Through SRSD, students can simplify and create a framework for the plethora of tasks involved in writing. Further, it provides them with a learning path to follow and makes visible the nature of the writing process. Finally, it increases their knowledge of how writing works and their insight into their own writing practice. What sets SRSD apart from the process writing approach or other types of strategy instruction is that it explicitly (i.e. verbally, metacognitively) singles out and addresses self-regulatory behaviour involved in writing like goal-setting, self-reinforcement and environmental structuring. Secondly, students with writing difficulties often experience other types of maladaptive academic beliefs and behaviour. An SRSD approach to writing can enhance overall academic self-regulation and motivation through its focus on self-efficacy and developing metacognitive awareness of oneself as a writer/learner.

The theory underpinning the use of strategies in writing has featured more or less prominently in every model of writing discussed in the theoretical framework. An embryonic manifestation of writing strategies can be seen in the generalized writing plans Hayes & Flower posit as being present in the writer's long-term memory. Bereiter & Scardamalia (1987) discerned two types, rhetorical and self-regulated, and Zimmerman & Risemberg's model (1997) hinged entirely on a further analysis of the latter, in addition to emphasizing the importance of Bandura's (1977) self-efficacy which also constitutes an important part of SRSD. Moreover, the focus on goal-setting and modelling can be traced back to Bereiter & Scardamalia's work.

Strategies are also afforded a place in the curriculum (GO! Onderwijs van de Vlaamse Gemeenschap 2014), which stresses goal-setting, pre-writing (using a mind map), text planning and revising. Revising is supposed to get an important place in the teaching of writing, but there are no clear suggestions as to what form this should take or what instruments should be used.

The reader will have noticed that Pressley et al. (1985: 4) defines strategies as "*cognitive operations*" [my italics]; applied to the field of writing, strategies should be conceived as the step(s) the writer takes in order to achieve her writing goal (whether this be the planning of the text as a whole or the drafting of a paragraph) and over which she has the potential to exert conscious control. However, the discussion above has shown that both theoretical models and didactic approaches for writing such as SRSD also assign an important role to *metacognitive* strategies. As such, strategies in the field of writing have traditionally been interpreted both cognitively (e.g. the drafting of the paragraph itself) and metacognitively (e.g. the awareness of behaviour conducive to writing and the knowledge of when and how to employ it). This murky conceptualisation of strategies in writing has given rise to scholars criticizing a lack of "theoretical rigour" (Macaro 2006: 320); a lack of a clear definition (Thomas & Rose 2018 provide an overview), culminating in Dörnyei (2005) questioning their very existence. Thomas & Rose (2018) attribute this terminological nebulosity to the fact that strategy use and self-directed learning have been conflated. They contend that they must be disentangled, as

regulated learning takes place on a continuum between other and self-regulated and propose the Regulated Language Learning Strategies Continuum as a model to conceptualise the relationship between strategy use and its instigator. This is an important contribution to the ontological reflection on strategies and as such merits consideration in this dissertation. However, as my research is practice-based, I will subscribe to a broad interpretation of strategies as is customary in SRSD and intervention-based studies in writing, interpreting strategies in writing as both cognitive and metacognitive and including self-regulation.

#### 5.4.3 WRITING-TO-LEARN

Writing as a tool for learning in content areas is advocated in some of the most influential professional literature on writing instruction (Graham & Perin 2007c, Graham & al. 2018). Bangert-Drowns et al. (2004) contend that its positive impact is due to writing-to-learn "scaffolding metacognitive processes, presumably in the service of developing self-regulation of learning strategies" (2004: 51). From a theoretical perspective, writing as a way to engage with subject matter can be likened to Bereiter & Scardamalia's (1987) knowledge-transforming, which posits a reciprocal relationship between the development of thought (i.e. content) and writing. It is also in line with their call for writing instruction which makes writing meaningful.

Finally, the curriculum (GO! Onderwijs van de Vlaamse Gemeenschap 2014) encourages Dutch teachers to cooperate with subject teachers to offer language support for their assignments and emphasizes the importance of learning in a functional context making use of authentic materials.

#### 5.4.4 CONCLUSION

This section has selected and discussed the didactic approaches that will form the foundation of my intervention. However, the theoretical framework and professional literature have been mainly concerned with L1 writing, whereas the language proficiency of the pupils at my school has been

typified as *L1½*, a hybrid form in between L1 and L2 proficiency. As such, I will now critically assess its applicability by surveying the literature on second language writing.

## 5.5 IS L2 WRITING DIFFERENT FROM L1 WRITING? – A COMPARISON

Since Silva's (1993: 669) diagnosis of a lacuna of a "coherent, comprehensive theory in L2 writing", second language writing has "evolved into a well-established field of inquiry" (Hyland 2016: 116), producing "abundant research evidence" (Manchón et al. 2007: 229). De Larios et al. (2002) conclude that research has commonly made use of Hayes & Flower's (1980) procedural framework to inform the understanding of the L2 writing process and add that Bereiter & Scardamalia's (1987) conceptualization of writing as knowledge-telling or knowledge transforming has also served as a framework of reference. Further, with regard to strategies in writing, Manchón et al. 2007 contend that writing strategies *do transfer qualitatively* across languages (i.e. a strategy can be applied in the L2 once acquired in the L1) but *vary quantitatively* (i.e. strategies cannot be carried out as profusely as in the L2) and qualify that "transfer of strategies seems to be mediated by the writer's [L2] proficiency" (2007: 246).

To sum up, although the theoretical framework draws on research into L1 writing, we can safely hypothesize that it retains its validity for *L1½* writers. After all, theorizing in L2 writing has drawn extensively on models from L1 writing research and it seems likely that writing strategies are transferred across languages, making them a worthwhile investment in an *L1½* remedial writing programme.

## 5.6 CONCLUSION & RESEARCH QUESTIONS

This chapter has supplied the tenets my intervention will be built on. By incorporating the process approach to writing and self-regulated strategies development into the intervention, it follows that

the intervention will involve attention to self-efficacy and the use of strategies. This implies that the success of the remedial writing programme should not only be gauged by the extent to which it improves the pupils' writing, but also by the effect it has on these dimensions. Accordingly, the research questions are the following:

1. What is the effect of the writing intervention on pupils' Dutch writing proficiency?
2. What is the effect of the writing intervention on pupils' self-efficacy in Dutch writing?
3. What is the effect of the writing intervention on pupils' use of strategies when writing in Dutch?

# 6 PILOT

## 6.1 INTRODUCTION

The research questions that were synthesized at the end of the previous chapter will guide the eventual assessment of the impact of the intervention. The first cycle consisted of a preliminary exploration that sought to investigate its didactic and logistic feasibility. Accordingly, the findings from this first cycle will be incorporated in the final design of the remedial programme in the second cycle. In this chapter the reader will be informed of how this part of the project was designed, set up and evaluated. As such, I stay true to the four-step action research approach, making concrete the *plan* for the intervention and putting it into *action*, *observing* its impact and *reflecting* on it.

## 6.2 DESIGN

The needs analysis demonstrated how the remediation is currently taught to an entire class group, irrespective of the pupils' individual need for it. Even though the economics and humanities strands typically have more pupils who do not speak Dutch as their mother tongue, these class groups consist essentially of pupils pursuing the same major and not necessarily of pupils with the same prior attainment. Furthermore, classes in the economics strands were reported as being more difficult to manage in terms of their behaviour. Hence, rather than involving the whole class in the remedial programme, a small group of tutees were selected to take part. By taking a small-group approach, I could focus on those pupils who are most in need of remediation and reduce the time lost on class management. Moreover, the highly individual nature of writing calls for dedicated individualized support.

The design of the programme is predominantly inspired by the process approach to writing. Adhering to its principles, the intervention took the form of three writing workshops in which pupils produced a written text with my support, a number which would allow sufficient attention to be paid to the three stages of writing (planning, translating and reviewing) (Hayes & Flower 1980). As the teacher, my role consisted of offering tailor-made writing instruction (a combination of guiding pupils through the writing cycles and language support) and creating a positive and safe writing environment (through positive reinforcement). The pupils would be encouraged to adopt the OVUR-approach ((GO! Onderwijs van de Vlaamse Gemeenschap 2014) prescribed by the curriculum to highlight the cyclical nature of the writing process. Self-Regulated Strategy Development was incorporated through the modelling of strategies pupils could employ while writing. This included me scaffolding brainstorming through thinking out loud, making suggestions for how to structure a paragraph or encouraging an iterative approach by suggesting the need to generate more content knowledge through reading. Appendix B provides a number of quotes from my transcriptions of the classes to give the reader a more concrete insight into the form my support took.

Finally, the writing assignment was set up as a collaboration between the Dutch and the economics courses, instrumentalizing writing as a tool to learn according to the principle of writing-to-learn. The assignment (Figure 12) was to write an email on the online learning platform to their Dutch teacher with advice on whether or not to invest in Bitcoins to make money to buy a house. Both the audience and the writing goal were semi-authentic in that the Dutch teacher was indeed saving up for this. Pupils were given reading materials to ensure they had sufficient background knowledge, which could also act as models for argumentative texts. The assignment was designed to fit both the Dutch and the economics curricula, the hand-out was developed by me in consultation with the economics teacher. Pupils used laptops and conventional word-processing software to write their texts.

Mevrouw Billens heeft je hulp nodig!

Mevrouw Billens wil een huis bouwen, maar huizen bouwen kost veel geld. Daarom heeft ze een idee: ze gaat geld beleggen in Bitcoins, zo kan ze haar kapitaal snel groter maken.



Vind jij het een goed idee dat mevrouw Billens geld in Bitcoins belegt om zo haar droomhuis te kunnen bouwen? Schrijf haar een Smartschoolbericht waarin je haar advies geeft. Leg uit in twee alinea's van telkens ongeveer 150 woorden waarom het (g)een goed idee is om in Bitcoins te investeren. Onderbouw je advies aan de hand van de informatie in de teksten, je eigen ideeën en je eigen voorkennis. Mevrouw Billens houdt niet van plagiaat: het is belangrijk dat je je advies volledig zelf schrijft en niets letterlijk overneemt uit de leesteksten of andere bronnen.

Versturen

Hoofdaccounts Co-accounts

Aan:

Kopie:

Blinde kopie:

Onderwerp:

Sjabloon Bijlagen

Bewerken Opmaak Media Tabel Invoegen Beeld

Open Sans 12px B I U A A

Beste mevrouw Billens,

Ik mail u met advies over uw Bitcoinbelegging. In dit bericht geef ik u twee redenen waarom het (g)een goed idee is om uw geld in Bitcoins te investeren.

<argument 1>

<argument 2>

Hopelijk heb ik u van mijn visie kunnen overtuigen en vond u mijn argumenten sterk. Voor verder beleggingsadvies kunt u steeds bij mij terecht.

Beste groeten,

Voornaam Naam

Figure 12 Writing assignment



# PILOT



## READING CLASS WEEK 1

1 period of reading for entire class  
in economics class



## REMEDIAL SESSION WEEK 2 WEEK 3 WEEK 4

1 period of scaffolded writing  
remediation for tutees by me  
during Dutch remediation period

## HOMEWORK

individual assignment  
for whole class  
(apart from tutees)  
3 weeks time



## FEEDBACK WEEK 6

1/2 period content feedback  
by economics teacher  
for entire class



### 6.3 SET-UP

Figure 13 on the previous page visualizes the timeline of this intervention. The assignment was given to the class as a whole and the tutees received support for three weeks after the initial reading class. Pupils who did not receive remediation were required to do the assignment at home. The economics teacher gave content feedback on all assignments through a feedback form we purposely designed for this intervention. The class as a whole was also given a plenary feedback session by their economics teacher which summarized the most common content problems.

In consultation with management and the remedial Dutch teachers, it was decided to implement the intervention with pupils in the final year economics programme. Their teacher was eager to have her pupils take part and it was felt that pupils who were on the verge of higher education might feel a more acute need to improve their writing skills. The same pupils who had taken part in the focus group were suggested as tutees by their teacher and were happy to collaborate (Figure 14). They were considered by their teacher to be some of the pupils most in need of writing remediation and are all from a multilingual background.



Figure 14 Tutees pilot

### 6.4 EVALUATION: METHODOLOGY & FINDINGS

The aim of this cycle is to get a feel for the teaching of the remedial programme and a sense of how pupils experience it. The methodological tools to assess this were selected with this twofold focus in

mind: I kept a teacher diary to collect and analyse my own observations and the pupils' perspective was examined through a focus group. These methods were deemed to provide relatively direct access to how both parties had experienced the intervention and are fairly straightforward and time-efficient to set up. Additionally, an interview was conducted with the economics teacher to collect her feedback. The reader will find the methodology for the second, more elaborate cycle of this research to be more expansive and provide further reflection, including on the tools used at the pilot stage.

The set-up of the intervention and the allocated time were generally evaluated positively. The economics teacher did indicate that pupils would have benefited from extra time to read the sources. I also noticed in my observation of the reading class that the pupils only had a very superficial knowledge of the topic of the assignment. In retrospect, the teacher felt the pupils would have benefited from some pre-teaching potentially by incorporating the assignment into a related chapter.

In a related vein, the decision to embed the writing assignment into the economics course, was very much to the satisfaction of the pupils ("it was our thing" (Aisha)) and the economics teacher. She indicated she rarely used unabridged authentic texts. Moreover, the writing of an argumentative text on a topical economic subject turned out to be a compulsory part of the curriculum which had not been incorporated into her classes previously, a lacuna she which became apparent through the collaboration in this intervention. The pupils were also enthusiastic about the small-group approach and felt it had a positive influence on their discipline and classroom behaviour: "We were being serious for once. Normally, in class, we just start chatting and moving about." (Jin-Wei).

The most important finding from this didactic pilot pertains to the operationalization of the didactic approaches underlying it. More specifically, I felt the scaffolding and the modelling of strategies lacked structure. Even though I was confident I could serve as a model for an expert writer, this ad hoc support, initially designed to cater to the individual needs of the pupils as they occurred, did not feel systematic enough. As a result of this, I wanted the programme to follow a more clearly delineated

form and simultaneously instil more explicit metacognitive awareness. This shortcoming will be explored further in the next cycle and asks for further consultation of the literature on SRSD.



# SECOND CYCLE

## IMPLEMENTATION

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LITERATURE REVIEW



KEYSTROKE LOGGING

CAF ANALYSIS



REMEDIAL TEACHING

2 cycles of 3 remedial classes  
+ reading & feedback session

FOCUS GROUPS &  
INTERVIEWS



STIMULATED RECALL



TEACHER-RESEARCHER DIARY

SURVEYS



# 7 FURTHER LITERATURE REVIEW

## 7.1 REVISITING SELF-REGULATED STRATEGIES DEVELOPMENT

To help remedy the shortcomings that were identified in the didactic pilot, I return to the literature on SRSD. The techniques that have been used in such programmes can be useful tools to streamline writing interventions and make them more tangible and accessible for learners, corresponding to the needs that surfaced in the first cycle. They include the use of mnemonics, graphic aids and strategies for revision/editing.

### 7.1.1 MNEMONICS

The use of *mnemonics* in education is a widespread practice that dates back to antiquity (Worthen & Hunt 2011, Yates 1966). In the field of writing instruction, it features prominently in SRSD approaches, especially those targeting struggling writers (e.g. Mason & Shriener 2008, Mason et al. 2010, Shora & Hott 2016). This is in line with the finding from Scruggs & Mastropieri's (2000) research synthesis that mnemonics are particularly effective in helping students with learning and behaviour problems to memorize academic content. SRSD-oriented writing programmes use acrostics to divide the writing process into stages or to delineate the components of the paragraph. Examples include POW (Figure 15) for the former (meta-support) and TREE for the latter (Figure 15). (Harris et al. 2002). Other acrostics that have gained some popularity include PLAN & WRITE (Figure 16) and STOP & DARE (Figure 17).

The figure originally presented here cannot be made freely available via ORA because of copyright. The figure was sourced at Harris, K., Graham, S., & Mason, L. (2002) POW plus TREE Equals Powerful Opinion Essays. *Teaching Exceptional Children*, 34 (5), 74–77.

*Figure 15 POW & TREE (Teacher ToolBox SRSD Strategies. (n.d.))*

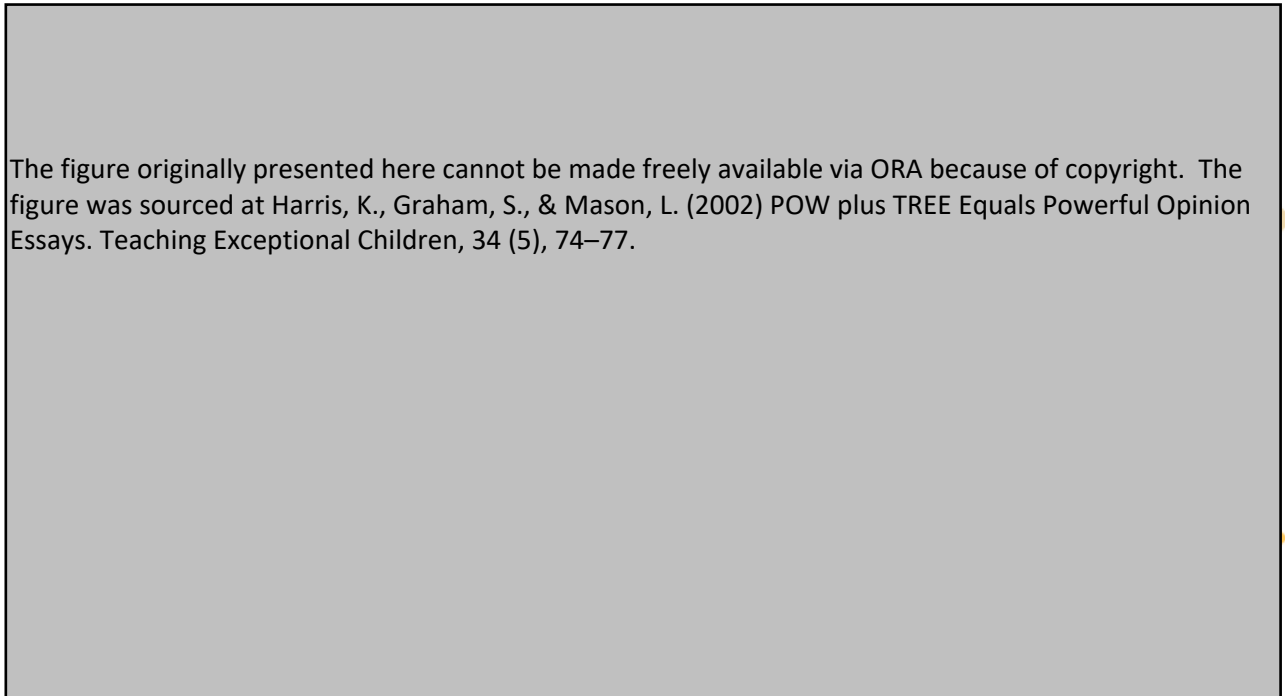
The figure originally presented here cannot be made freely available via ORA because of copyright. The figure was sourced at De La Paz, S. (1999) Self-Regulated Strategy Instruction in Regular Education Settings: Improving Outcomes for Students With and Without Learning Disabilities, *Learning Disabilities Research & Practice*, 14 (2), 92-106.

*Figure 16 PLAN & WRITE (De La Paz 1999: 98)*

The figure originally presented here cannot be made freely available via ORA because of copyright. The figure was sourced at De La Paz, S. (2001) STOP and DARE: A Persuasive Writing Strategy. *Intervention in School and Clinic*, 36 (4), 234–243.

*Figure 17 STOP & DARE (De La Paz 2001: 236)*

Typically, the mnemonic is introduced in a six-step didactic sequence (Figure 18), decreasing the scaffolding as teaching progresses (Harris et al. 2002).



*Figure 18 Decreasing scaffolding*

Using mnemonics may seem reductionist and contrived in the teaching of a complex skill like writing. To this concern Putnam (2015: 132-133) synthesizes two responses, viz. that "mnemonics were designed to enhance recall, not facilitate higher order learning" and that the simplification they entail leaves more time for precisely this higher order learning.

### 7.1.2 VISUAL AIDS & ORGANISERS

Visual aids feature in SRSD programmes in a number of ways. Apart from the fact that mnemonics are often offered in a visually pleasing way, as illustrated earlier, this section will explore how graphic devices can be used to structure content knowledge and to chart progress.

To provide pupils with more guidance in the *pre-writing stage*, I turn to the strategy based teaching of reading, with reading being the tool to develop content knowledge in this stage. In order to arrive at a deeper understanding of a text, Bulgren et al. (2007, 2009, 2011, 2013) advocate using Question Exploration as a Content Enhancement Routine. This technique (as exemplified in Figure 19) involves providing a graphic device with predefined questions to extract content from texts (e.g. “What is the Central Question”, “What are the Key Terms and explanations”). It facilitates the acquisition of foundational knowledge by providing mechanisms for synthesising information (Bulgren et al. 2007) and has been found to enhance both higher order thinking and the retention of information in students of all abilities (Bulgren et al. 2011).

The figure originally presented here cannot be made freely available via ORA because of copyright. The figure was sourced at Bulgren, J., Marquis, J., Lenz, B., Deshler, D., & Schumaker, J. (2011) The effectiveness of a question-exploration routine for enhancing the content learning of secondary students. *Journal of Educational Psychology*, 103 (3), 578–593.

*Figure 19 Example of a Question Exploration Guide (Bulgren et al. 2011: 582)*

Secondly, *self-monitoring* is well-established in the field of SRSD interventions and occurs “when a student self-assesses whether or not behaviour has occurred and then self-records the results” (Harris et al. 2011: 191). Applied to writing, pupils can self-monitor their performance by counting the number of words or paragraphs or checking the presence of certain elements in the build-up of their argument. This number is then self-recorded with the aid of a graph (Rathvon 1999). Pupils are encouraged to return to their graph in different stages of the writing programme and update it with

their new data, with the visual representation of their progress stimulating motivation (Graham & Harris 2018).

### 7.1.3 REVISION AND EDITING

Revision is "a critical part of writing and writing instruction" (MacArthur 2016: 272) and often lacking in quality in novice writers, who are overly concerned with surface elements (e.g. spelling) at the expense of attention for the content and overall quality of their text (De La Paz et al. 1998, Eissa 2017). In spite of this observation, relatively few SRSD writing programmes (Sherman & De La Paz 2015) have included an explicit focus on revision skills.

As such, it seems part of revision and editing in process and SRSD writing approaches falls between two stools: the mechanics of writing automatically receives attention from novice writers and the content is continuously monitored as a result of the scaffolded procedural approach. This leaves the stylistic dimension insufficiently attended to, a lacuna which the *Schrijfhulp Academisch Nederlands*<sup>6</sup>, developed by the Instituut voor Levende Talen at the University of Louvain, aims to fill (Figure 20) (De Wachter & D'Hertefelt 2013, 2014). This online revision tool has the ambition to go beyond the mere mechanics (although spelling feedback is also included) of writing and provides guidance on different aspects of a text (style, coherence and cohesion). Writers get tailor-made feedback on different dimensions of their text by being confronted with its complexity, an overview of the elements of a certain aspect it contains (e.g. paragraphs, linking words) and an explanation on each of them.

## 7.2 CONCLUSION

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<sup>6</sup> Academic Writing Help Dutch

This chapter has addressed several highly practicable tools to improve my remedial programme inspired by the SRSD approach to writing. Using mnemonics, I will enrich my intervention with a logical step-by-step approach that cultivates metacognitive awareness. Secondly, a graphic organiser for pre-writing will be incorporated to guide the reading done prior to writing to generate content knowledge and progress will be made visual through graphing. Finally, the integration of a digital aid will give pupils the necessary tool for revision.

Tekst controleren | **Tekst verkrijgen**

Welkom op de website van de Schrijfhelp Nederlands. De schrijfhelp werd ontwikkeld om studenten te ondersteunen tijdens het schrijfproces.

De Schrijfhelp Nederlands wil je **bewustmaken** van **mogelijke** foutenpatronen in de tekst. De aangeduide woorden of woordcombinaties in de tekst zijn dus niet noodzakelijk fout. Omdat de schrijfhelp zich focust op de drie niveaus (structuur en samenhang, stijl en spelling) worden niet alle mogelijke schrijfproblemen aangeduid.

Aantal (tussen)titels in deze tekst:   
Deze informatie is nodig om correcte statistieken te kunnen berekenen.  
(Tussen)titels moeten van alinea's gescheiden zijn door een 'harde' enter. [Klik hier](#) voor meer uitleg.

Plaats je tekst hier...

- STRUCTUUR EN SAMENHANG
  - ▶ Tekstanalyse
  - ▶ Verwijswoorden
  - ▶ Signaal- en structuurwoorden
  - ▶ Frequente inhoudswoorden
  - ▶ Vaak terugkerende patronen
  - ▶ Zinslengte
  - ▶ Alinealengte
- STIJL
  - ▶ Formele en archaische woorden
  - ▶ Passieven
  - ▶ Omslachtig taalgebruik
  - ▶ Naamwoordstijl
  - ▶ Vage en algemene woorden
  - ▶ Persoonlijk taalgebruik
  - ▶ Informele, spreektaalige en gekleurde woorden
- SPELLING
  - ▶ Spelfouten
  - ▶ Aaneenschrijven of niet?
  - ▶ Afkortingen

Figure 20 Schrijfhelp Academisch Nederlands

# 8 UPDATING AND IMPLEMENTING THE INTERVENTION

## 8.1 INTRODUCTION

This chapter discusses how the conclusions from the previous cycle were incorporated through on the one hand, minor practical modifications; and on the other hand, a complete revision of the intervention based on the findings from the additional literature review. It will also provide an overview of how the resulting intervention, the 'OREO' remedial writing programme, was put into practice, paying attention to how it was set up and how participants were selected. It is important to note that because of personal reasons I had to suspend my research after the first cycle. As a result, the second cycle had to be organized the following school year; consequently new tutees had to be selected and the Bitcoin assignment could be reused.

## 8.2 SET-UP

Figure 22 (p. 59/60) details the form which the second cycle took, viz. two sets of three weekly workshops. Again, pupils were given a laptop and wrote their texts using conventional word-processing software. Following the feedback from the first cycle, more time was allocated to the reading class for the economics assignment. Further, the Bitcoin assignment was integrated into a chapter on a related topic, to ensure pupils' background knowledge would have been activated. The economics teacher was still highly motivated to take part, but it was difficult to find a teacher who was willing to cooperate in the second assignment. In the end it was decided to work on an assignment for Dutch literature. It is acknowledged that this is an atypical form of "writing across the curriculum", as this typically involves the collaboration between a language and a content teacher. Even though

literature is part of a language course, the teaching of it is akin to that of social studies or history. Consequently, it was decided that this ‘real world compromise’ could indeed be considered a form of “writing-to-learn”. The Dutch literature assignment was a piece of argumentative writing on the value of teaching canonical Dutch literary texts and was based on the curriculum for both literature and language proficiency. An assessment sheet was developed, based on the one used for the previous assignment on the Bitcoin text. The Dutch teacher used this to provide content feedback and summarized her findings in a short plenary feedback session.

Following the positive results from the first cycle, and given that the reasoning behind the selection of tutees was still applicable, it was decided to implement the intervention again in the final year of the economics strand. With the size of the class group being unusually low, all seven pupils were selected to take part in the intervention, as it was deemed undesirable to split them up. Moreover, their teacher considered all of them to be struggling writers and they all had a multilingual background (Figure 21). The ethical dimension of the selection of tutees will be elaborated on in a dedicated section on ethics (Chapter 11).



Figure 21 Tutees second cycle



## CYCLE 2

phase 1  
economics assignment



### READING CLASSES WEEK 1

2 periods of reading in economics class



### REMEDIATION SESSION WEEK 2 WEEK 3 WEEK 4

1 period of scaffolded writing  
remediation for tutees by me  
during Dutch remediation period



### FEEDBACK WEEK 5

1/2 period content feedback  
by economics teacher





## CYCLE 2

phase 2  
Dutch literature assignment



### READING CLASSES WEEK 6

2 periods of reading in Dutch class



### REMEDIAL SESSION WEEK 7 WEEK 8 WEEK 9

1 period of scaffolded writing  
remediation for tutees by me  
during Dutch remediation period



### FEEDBACK WEEK 10

1/2 period content feedback  
by Dutch teacher



### 8.3 RECONFIGURING THE INTERVENTION: THE OREO REMEDIAL WRITING PROGRAMME

The pilot revealed a need for a more structured approach and consultation of literature on SRSD-based interventions in the previous chapter revealed a number of promising methods to accomplish this. Scrutinizing some of the popular mnemonics used in the teaching of writing (section 7.1.1), I wanted the approach to include strategies at the level of the *paragraph*, the *text as a whole* and the *metalevel*, that of the writing process in general. I felt that this division could make the writing process more accessible to pupils, if I could incorporate it into one approach which subsumed the different stages of the writing process and the strategies used in them.

I came up with the mnemonic 'OREO' for this, after the popular biscuit: pupils could associate the three layers of the biscuit with the triadic take on writing (paragraph, text and meta) and the letters of the word OREO were a good fit to accommodate strategy instruction at every level (Figure 28, p. 68-69). In other words, the acrostic OREO provided a playful and attractive vehicle for the development of self-regulated strategies, and the different layers of the biscuit an accessible rendition of the writing process. The arrows indicate its recursive nature, a characteristic which was emphasized in the instruction.

At the metalevel, i.e. the global level at which the planning of a text takes place, the OREO strategies include (Figure 23):



Figure 23 Meta OREO

At the level of the task or text as a whole they consist of (Figure 24):



Figure 24 Text OREO

At the level of the paragraph they are (Figure 25):



Figure 25 Paragraph OREO

Appendix C contains the slideshow that was used to structure the course and a summary of the accompanying teaching. This PowerPoint presentation also functioned as a scaffolding device; overall the programme was organized according to a bespoke take on the SRSD stages of instruction (Graham et al. 2014, Appendix D). Because of the length of my intervention, it was impossible to arrive at the independent performance stage; whereas modelling (through thinking aloud) and repetition did feature extensively in the instruction.

Returning to the theoretical grounding of the intervention, table 1 outlines how the three OREO levels –viz. the text or paragraph, the task or text as a whole and the metalevel– can be tied to the four most important theoretic models of writing and different conceptualizations of self-efficacy in writing (Literature review section 5.3). It is acknowledged that this model imposes a form on the writing process and its associated theories which inevitably reduces their complexity. Moreover, the distinction between levels can be hard to make, with certain dimensions of the writing process spread out over several levels. A final caveat is that this visualization does not do justice to the recursive

nature of writing, as of course there is a dynamic interplay between these levels in the course of the drafting of a text. That being said, the purpose of this table is merely to illustrate that the triadic conceptualisation of writing proposed by the OREO remedial writing programme can in effect be embedded in the available literature.

Shell et al. 1989	Bruning et al. 2013	Teng et al. 2018	Hayes & Flower 1980	Bereiter & Scardamalia 1987	Hayes 1996	Zimmerman & Risemberg 1997
meta-level						
	self-efficacy: ideation, self-regulation	self-regulatory efficacy	Planning, monitor, reviewing	knowledge transforming	reflection, motivation/affect, long-term memory	covert, behavioural & environmental self-regulation
task-level						
task self-efficacy		performance self-efficacy	task-environment	knowledge-telling & knowledge-transforming	task-environment, task schemas, long-term knowledge	
text-level						
component skill self-efficacy	self-efficacy: conventions	linguistic self-efficacy	translating	knowledge-telling	text production, long-term knowledge	

Table 1 Three levels of strategy use

A question enhancement routine (as discussed in section 7.1.2, Visual aids & organizers) was incorporated into the first OREO level, which includes generating topic knowledge in the step *Exploreer het onderwerp*<sup>7</sup> (Figure 26), to provide guidance on how to extract meaning from a text and structure one's thoughts on a topic. To stimulate pupils to attain the set number of words and pay attention to variety in their choice of words, they were given a graph (Figure 27) after their first

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<sup>7</sup> Explore the topic

assignment which showed the word count and type-token ratio (a widely-used, conceptually easily accessible measure of lexical richness) for their text on the Bitcoin. They were asked to calculate the word count and type-token ratio for their second assignment, graph it and make sure they showed positive progress. The *Schrijfhulp Academisch Nederlands* was used to facilitate revision at the task level for the O of *Op het einde grondig reviseren*.<sup>8</sup>

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<sup>8</sup> Revise thoroughly at the end

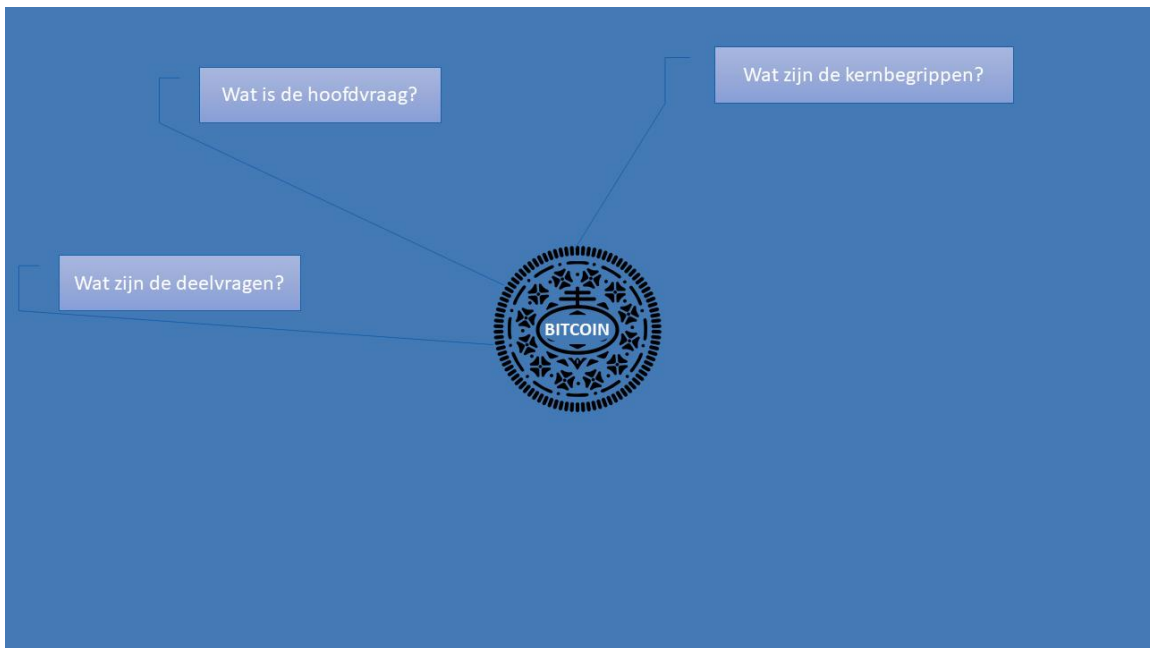


Figure 26 Topic exploration

## ALEXANDRA



Figure 27 Progress graph

### 8.4 CONCLUSION

Now that the reader has been familiarized with the OREO remedial writing programme and how the intervention was implemented, the next chapter will provide a discussion of the methodology used to assess the pupils' writing pre- and post-intervention. This brings us to the third step of this four-step action research cycle, viz. the *observation* of the impact of the intervention.

schrijfvaardigheid oefenen met de

**OREO**  
methode



*PRACTICE YOUR WRITING SKILLS WITH  
THE OREO METHOD*

- 👁️ PDRACHT ANALYSEREN  
*ANALYZE ASSIGNMENT*
- R USTIG CONCENTREREN & STRATEGIEËN GEBRUIKEN  
*STAY CALM & USE STRATEGIES*
- E XPLOREER HET ONDERWERP  
*EXPLORE THE TOPIC*
- 👁️ PNIEUW BEGINNEN WANNEER NODIG  
*START OVER WHEN NECESSARY*



- 👁️ ONDERWERPSZIN  
*TOPIC SENTENCE*
- R REDELEN, UITLEG OF VOORBEELDEN GEVEN  
*GIVE REASONS, EXPLANATION OR EXAMPLES*
- E EXTRA AANDACHT VOOR STRUCTUURWOORDEN  
*EXTRA ATTENTION FOR STRUCTURING DEVICES (LIT. STRUCTURE WORDS)*
- 👁️ PZOEKEN WAAR JE NIET ZEKER VAN BENT  
*LOOK UP IF YOU'RE NOT SURE*

- 👁️ VER JE STRUCTUUR NADENKEN  
*THINK ABOUT YOUR STRUCTURE*
- R REDENERING OPBOUWEN MET DE REGEL VAN 3  
*BUILD REASONING USING RULE OF THREE*
- E ÉN IDEE = ÉÉN ALINEA  
*ONE IDEA = ONE PARAGRAPH*
- 👁️ P HET EINDE GRONDIG REVISEREN  
*REVISE THOROUGHLY AT THE END*

# 9 INTERVENTION: EVALUATION

## 9.1 INTRODUCTION

Three types of sources were consulted to select and conceive the methodological instruments for my research: similar peer-reviewed studies, literature on research methodology and advice from experts in the field of linguistics and writing research. This led to a carefully-selected mix of research methods and this triangulation of data allows us to verify findings to corroborate conclusions. Because of the small number of participants, the focus this research is mostly qualitative in nature (focus groups and stimulated recall/interview). Although a statistical analysis is impossible because of the sample size, I did include a quantitative component in the form of a survey. The reason for employing this mixed methodology is threefold: the quantitative data have an explanatory potential at the level of the individual participant because they offer a fine-grained picture of them, they can reveal trends (that should, once again, be interpreted with great caution because of the sample size) and they can be of value for future research. In addition to the methodological instruments mentioned earlier, I kept a teacher-researcher diary to document my experiences after every class I taught. In this reflective account I documented striking observations and any problems I was faced with. The survey that was used, including a detailed description of how it was developed, is available in Appendix E.

This discussion is structured according to the research questions and the reader will find it addresses the methodological tools in the order of the dimension they are meant to examine:

1. What is the effect of the writing intervention on pupils' *Dutch writing proficiency*?
2. What is the effect of the writing intervention on pupils' *self-efficacy in Dutch writing*?
3. What is the effect of the writing intervention on pupils' *use of strategies when writing in Dutch*?

Figure 29 provides an overview of the different research methods that were employed.

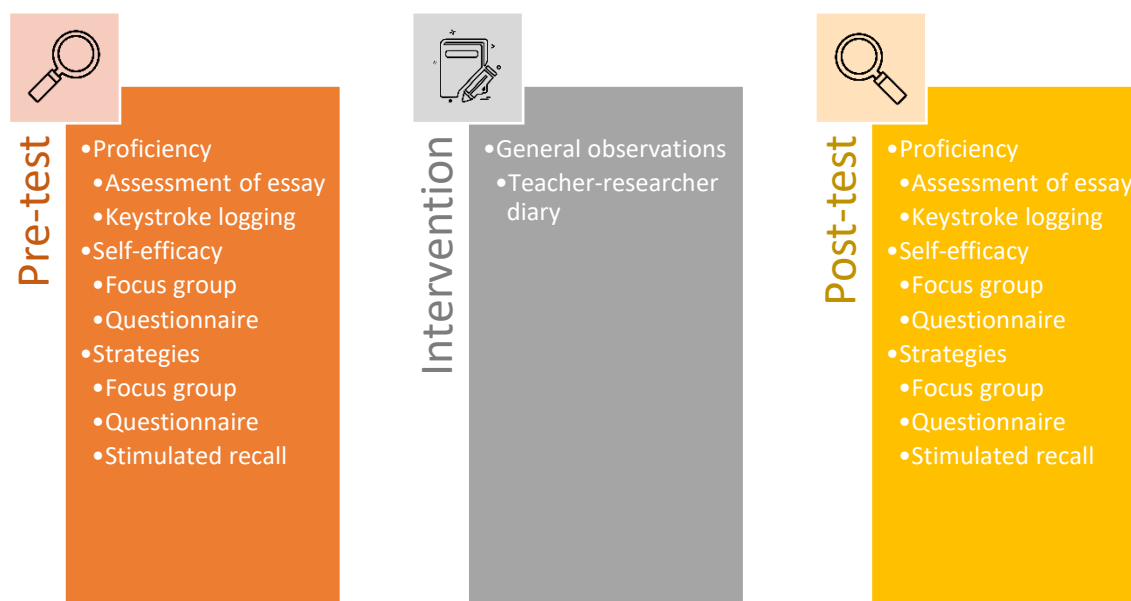


Figure 29 Overview methodological instruments

## 9.2 MEASURING WRITING PROFICIENCY

To assess the evolution in the quality of their texts, pupils were asked to produce a persuasive text pre- and post-intervention. I made use of previous assignments from research by Coertjens et al. (2017) in a similar setting to ensure the quality of the writing prompts. Both tasks corresponded to the curriculum for argumentative writing (Ministerie van Onderwijs 2012) which was also at the basis of the writing assignments set during the intervention. The task had to be written with conventional word-processing software in under 25 minutes and participants were expected to write roughly one page.

### 9.2.1 WRITING MEASURES: COMPLEXITY, ACCURACY AND FLUENCY (CAF)

Language proficiency is a multicomponential construct, frequently considered to consist of the triad *complexity*, *accuracy* and *fluency* (CAF) (Ellis & Barkhuizen 2005, Housen & Kuiken 2009, Wolfe-Quintero et al. 1998). These being the most well-established measures of the quality of a text, they

are a logical choice for my research. Wolfe-Quintero et al. (1998) and Ellis & Barkhuizen (2005) offer the most comprehensive overviews of CAF-measures to date. Accordingly, I turned to their volumes to select the variables most suited for my research and supplemented this with literature on more recent trends in CAF research.

*Complexity* can be subdivided into grammatical and lexical complexity (Nasseri 2017). *Grammatical complexity* was operationalized as words per T-unit (MLTU, Mean Length T-Unit)<sup>9</sup> (Wolfe-Quintero et al. 1998). I used McCarthy & Jarvis' (2010) MTLT, Measure of Textual Lexical Diversity, to measure *lexical complexity*. This index makes use of the type-token ratio (TTR)<sup>10</sup>, the most widely known measure for lexical diversity, but is not impacted by the length of the text, which is the most important criticism with TTR. This is done through a more complex, iterative calculation, evaluating the TTR for sequences of words within a text, the technicalities of which can be found in Appendix F. Several studies have confirmed the validity of MTLT (Koizumi & In'Nami 2012, McCarthy & Jarvis 2013). I used software designed for the analysis of complexity in Dutch texts (T-Scan, Pander Maat et al. 2014) to calculate the MTLT for every text.

To measure *accuracy* I calculated the percentage of error-free T-units (Wolfe-Quintero et al. (1998). This was deemed to be a good compromise between a holistic approach using descriptive scales (with a risk of low inter-rater reliability (Polio 1997)), and a count and classification of each individual error (which can pose reliability and validity concerns (Foster & Wigglesworth 2016)). I calculated the accuracy ratio for the tutees' writing by checking every T-unit for mistakes. T-units that were deemed to contain any grammar, vocabulary or spelling error were counted as incorrect. Error-free T-units have been defined in various ways, with different studies employing different takes on what

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<sup>9</sup> A T-unit is defined by Hunt (1970: 189) as the "shortest units into which a piece of discourse can be cut without leaving any sentence fragments as residue"; accordingly a T-unit consists of a clause with a finite verb that functions independently and is not embedded syntactically (e.g. through subordination or relativization).

<sup>10</sup> the number of different words divided by the total number of words

exactly constitutes an error. Tedick (1990: 129) reconciles these differing points of view with the advice that “what appears to be important to research is the consistency with which the T-units are judged to be error-free”.

It is acknowledged that these measures are prone to criticism as they are somewhat crude and indeed an entire literature on some of their limitations can be found (see Hout & Vermeer 2007). However, no measure is perfect and my proposed measures are widely used, justifying their use in my own study and aiding comparability of my findings with those from other research.

For an in-depth examination of my participants' *fluency* in writing, I used Inputlog. This keystroke logging programme is designed to minutely observe and register writing processes and is suitable for examining writing development in educational settings (Leijten & van Waes 2013; Van Waes, Leijten, Wengelin et al. 2012). In essence, “the main rationale behind keystroke logging is that writing fluency and flow reveal traces of the underlying cognitive processes” (van Weerdenburg et al. 2019: 150). Fluency in writing is typically associated with “short pausing times, few revisions and a high production rate” (van Waes & Leijten 2015: 80), with pauses being “indexical of cognitive effort” (Leijten & van Waes (2013: 3)). To approach fluency as a “multimodal construct” (van Waes & Leijten 2015: 84), I supplemented a basic product-based measure for fluency –characters and words per minute– with the process-based ‘P-bursts’. The latter are “[writing b]ursts [...] terminated by a pause” (Chenoweth & Hayes 2003: 103). They reflect how fluently the text came about: fewer bursts indicate a higher number of words per burst and consequently more fluency, whereas more bursts signal a more ‘choppy’ style with short strings of words in every burst and lower fluency.

### **9.3 MEASURING SELF-EFFICACY**

Since Bandura introduced the term self-efficacy in 1977, studies in its ensuing paradigm have invariably made use of surveys. This also extends to writing self-efficacy research (Pajares 2003),

where the development of purposively constructed scales took off in the 1980s (see Bruning et al. 2013 for a historical overview). Accordingly, I chose to subscribe to this tradition and include a quantitative component. However, as it is impossible to find significant changes in a sample of seven participants, prompts on self-efficacy were also included in the focus group. This way, evolutions that surfaced in the focus group could be checked against the survey results.

### 9.3.1 WRITING SELF-EFFICACY SCALE

An inventory was drawn up of items from Writing Self Efficacy Scales selected from some of the most frequently-cited studies (Shell et al. 1989, Zimmerman & Bandura 1994, Pajares 2007, Bruning et al. 2013) and research on L2 writing self-efficacy beliefs (Teng et al. 2018 ). 22 items were selected based on their relevance to the tenets of the intervention and fourteen additional items were designed to tap into feelings of self-efficacy specific to aspects of the intervention. In accordance with Bandura's (2006) *Guide for constructing self-efficacy scales*, a 100-point scale (0: *cannot do at all* - 100: *highly certain can do*) was used for pupils to indicate the strength of their beliefs.

### 9.3.2 FOCUS GROUP

Vaughn et al. (1996) define a focus group as "an interactive discussion that can elicit a greater, more in-depth understanding of perceptions, beliefs, attitudes, and experiences from multiple points of view and to document the context from which those understandings were derived". Focus groups thus allow the probing of pupils' writing experiences and attitudes "elicit[ing] multi-faceted accounts" (Barbour 2007: 2). In an overview of methodologies in L2 research, Hyland (2016) also mentions how focus groups can be used in second language writing research to discover the writing needs and difficulties students may have.

Apart from the absence of multiple points of view, however, interviews would equally fulfil the expectations set for the qualitative component of my research tool box. Although the use of

interviews was considered, focus groups were deemed a better choice because of methodological and practical reasons. First, engaging in a group conversation allows for a dynamic to develop. Vaughn et al. (1996: 19) synthesize research that indicates that data generated through focus groups is often "richer and fuller" than interview data because of this dynamic and because answers may be more "genuine and substantial". On a practical level, focus groups are more time-effective than interviews. As it was decided that the research would take place during classes, organising interviews would impose a strain on my fellow teachers, as pupils would have had to miss classes.

All seven tutees participated in the pre- and post-test focus group, which featured questions on writing self-efficacy, strategy use and their attitude towards Dutch and writing. The focus groups took about 30 minutes and were conducted in the pupils' regular classroom. An example of the PowerPoint slides used to guide the focus group is appended (Appendix G).

## 9.4 MEASURING WRITING STRATEGIES

A triadic approach to measuring the use of strategies was adopted, consisting of a survey, focus group and stimulated recall. Apart from being quick and efficient (Dörnyei & Taguchi 2010), the *survey* pinned down the rather abstract use of strategies through explicit questions on their use and a 5-point Likert scale to record the answer. The organisation of a *focus group* allowed for a degree of richness to be added to the data. *Stimulated recall* was included in the methodological design in an attempt to tap into pupils' use of strategies as directly as possible. This was deemed desirable because there can be a discrepancy between self-reported and actual use of strategies (Foerst et al. 2017).

### 9.4.1 ENGLISH WRITING STRATEGY INVENTORY SURVEY (EWSI)

Hwang and Lee (2017) propose a carefully designed scale to reliably measure L2 writing strategy use called the English Writing Strategy Inventory. 23 out of its 24 items were selected, one item was left out because it overlapped completely with an item from the Writing Self-Efficacy Scale. The original

five-point Likert scale (ranging from *never heard of/never use strategy* to *always use strategy*) was used in translated form.

#### 9.4.2 FOCUS GROUP

For a discussion of the affordances of this method and how it was implemented, I refer to the discussion under 9.3.2.

#### 9.4.3 STIMULATED RECALL

I originally set out to register the use of strategies using a think-aloud protocol, whereby pupils would speak "whatever words come to mind as they complete a [writing] task" (Mathison 2005: 420). Despite having created the right circumstances and having read up on how to execute this type of research, my experience was overwhelming. This is acknowledged by Chi (1997) who recognizes how novice researchers in the social sciences can feel discouraged by this research method. It was hard to keep probing into the pupil's writing and examine her body language and facial expressions while looking at the screen. Additionally, I felt the fact that the pupil was asked to elucidate her writing approach could increase her metalinguistic awareness, hereby risking to "lead the witness" (Charters 2003: 72). I discussed this observation with a senior researcher from the University of Applied Sciences in Utrecht specialized in writing research, who suggested using stimulated recall rather than a think-aloud protocol (C. van Beuningen, personal communication, 19 February 2019). Appendix H contains background reading on the think-aloud protocol; as it was not used as a research method in the end, it is only offered here as additional context of the methodological design of this study.

Stimulated recall explores "learners' thought processes and strategies by asking learners to reflect on their thoughts after they have carried out a predetermined activity" (Gass & Mackey 2000: 27). To support them in their retrospection, support is given in the form of a screen recording. This method did indeed afford several advantages over the think-aloud protocol:

- there is no risk of potential cognitive overload with the respondent as she can go about writing a text as she would normally do;
- because there is no metacognitive focus during the writing process, respondents' metacognition is not heightened, avoiding any reactivity in this area;
- as a researcher, it is easier to focus on the recording than on the real-time writing process,
- additionally, the recording allows for jumping between different phases in the composition process, resembling the iterative nature of the writing process.

Drawing on Fonteyn et al. (1993), Charters (2003) and Gass & Mackey's (2000), a procedure was outlined to ensure a uniform approach. Questions were kept to a minimum and pupils were encouraged to share any thoughts that might have gone through their heads, emphasizing that even the most mundane thoughts could be valuable insights. Pupils were first asked to go over the recording (at increased speed) and voice what had been going through their mind at the time with me occasionally pausing at seemingly significant moments (e.g. long pause, start of a new paragraph). In a second instance, I would specifically target the use of strategies by going over a list adapted from the questionnaire and ask if at any point they had used that strategy and if so when and how. It is considered good practice (Meier & Vogt 2015) to organise the stimulated recall as quickly after the task as possible, a principle which was respected in all cases by immediately following up on the writing with the stimulated recall. To record the screen, Camtasia (<https://www.techsmith.com/store/camtasia>) and InputLog (<https://www.inputlog.net/>) were used.

# 10 FINDINGS & DISCUSSION

## 10.1 INTRODUCTION

This section will present and analyze the findings of this study and discuss how they relate to writing theories and previous research. As such it will form the reflection part of the action research cycle, and the three research questions will guide the reader through it.

Before assessing the impact of the intervention, a word of caution is in order. In spite of being thoughtfully designed and implemented, the nature of this intervention does not allow for resolute or generalizable claims regarding impact, correlation or causation. First, the intervention could only be implemented for a limited amount of time, making it difficult to engender profound change. Second, because the holistic pre- and post-testing was highly time-consuming, it was not possible to set up a control group within the scope of this study. As we cannot compare the data to pupils who did not receive the treatment, we cannot rule out that any change is due to chance or merely getting more personalized support and positive reinforcement, regardless of the nature of the intervention. However, the methodological design of this intervention can partly overcome this, as changes in one type of data can be triangulated with other findings. Third, as this study involved intensive tuition of a small group of tutees, the sample size is equally small. As a result, these data will be offered descriptively and no claims regarding their statistical significance can be made. It was impossible to carry out a non-parametric test, typically used for small sample sizes, on the proficiency data because the number of tutees was too small (n: 4) and for the survey data (n: 6) it was deemed of no added value, particularly in the absence of a control group. Although it is important to formulate these caveats, they in no way undermine the value of the research. As a piece of practitioner research, the cautious conclusions that will be drawn should first and foremost be judged on the value they have to

*myself*, the practitioner taking a significant step on the path of professional development, *my students* and *my school*.

## 10.2 WHAT IS THE IMPACT OF THE INTERVENTION ON PUPILS' WRITING PROFICIENCY IN DUTCH?

Table 2 presents the results for the four pupils for whom valid data were available for complexity, accuracy and fluency. Data for three pupils were discarded/unavailable because of logistic reasons or technical difficulties.

In this table, positive change is highlighted in green and negative in red, the former corresponding to an increase in the variable that is counted, the latter to a decrease. For P-bursts, however, the desired progress is a decrease, as fewer P-bursts indicate fewer pauses and, accordingly, more bursts of uninterrupted writing.

Overall, the image we are presented with for writing proficiency is rather disparate. All four pupils show both positive and negative change post intervention. The duration of this intervention was limited, however, and the following discussion will illustrate that longer instruction may be necessary for proficiency to improve in measurable ways. Furthermore, even though it can be considered the ultimate goal of an intervention of this type, increasing proficiency was not its sole focus. Because of its holistic nature, the intervention is unlikely to have a short-term impact on CAF, as its design aims to teach and foster a framework within which these can develop in the long run.

Table 2 CAF

		ALEXANDRA				EKONDU				JEAN-PAUL				ZELDA			
		PRE	POST	+/-	AVG	PRE	POST	+/-	AVG	PRE	POST	+/-	AVG	PRE	POST	+/-	AVG
<b>COMPLEXITY</b>																	
SYNTACTIC																	
	MLTU	11.58	12.26	6%	11.92	15.94	12.26	-23%	14.10	14.48	13.15	-9%	13.81	9.64	8.77	-9%	9.21
LEXICAL																	
	MTLD	78.76	57.93	-26%	68.34	71.75	85.09	19%	78.42	79.76	73.94	-7%	76.85	40.58	48.87	20%	44.725
<b>ACCURACY</b>																	
% error-free T-units		50%	59%	19%	55%	83%	57%	-32%	70%	67%	80%	20%	73%	59%	45%	-24%	52%
<b>FLUENCY</b>																	
	strokes/minute	68.00	86.00	26%	77.00	69.00	67.00	-3%	68.00	64.00	68.00	6%	66.00	47.00	67.00	43%	57.00
	# words	283	350	24%	317	289	283	-2%	286	306	265	-13%	286	212	274	29%	243
	P-bursts	97	92	-5%	94.50	78	48	-38%	63.00	52	44	-15%	48.00	98	74	-24%	86.00
	words/P-burst	2.92	3.80	30%	3.35	3.71	5.90	59%	4.54	5.88	6.02	2%	5.95	2.16	3.70	71%	2.83

## 10.2.1 COMPLEXITY

### **Syntactic complexity**

The syntactic complexity data show no substantial difference pre- and post-intervention, with the Medium Length T-Unit increasing for one tutee and decreasing for three, but generally not fluctuating by more than 10 percent, except in the case of Ekundu. It is impossible to definitively account for her marked decrease in syntactic complexity based on the available data, but the stimulated recall and interview show that she was the one who indicated most emphatically having been under time pressure when writing the post-assignment. This chimes with research by Lu (2011) that shows that time constraints can negatively impact syntactic complexity. The intervention was not expected to have impacted pupils' syntactic complexity because of its limited duration. This is corroborated by Ortega (2003), who concludes in her research synthesis of 25 studies on college-level EFL and L2 English writers that substantial changes in syntactic complexity require about one year of college-level instruction.

The data show a wide range of MLTU<sup>11</sup>, with average values of 9.20 (Z), 11.92 (A), 13.81 (JP) and 14.10 (E). Apart from Ekundu, pupils' scores were relatively consistent between performances. The difference in average complexity between the pupils with the most and least syntactically complex texts is almost five words. This should be considered a significant difference in the light of Ortega's (2003: 513) finding that a difference of two words in MLTU is "'typical' of between-proficiency differences and differences over time in L2 syntactic complexity". With syntactic complexity being indexical of overall writing proficiency (Ortega 2012), the striking discrepancy in MLTU is indicative of a mix of pupils with a wide range of abilities. A possible explanation for this comes from Gaies (1980: 54), who draws attention to maturation effects in L1 speech and writing development, where "growth is linear and uniform, since children's speech and writing contain longer T-units at any given

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<sup>11</sup> Mean Length T-Unit

age than at an earlier age". Verification of the dates of birth of the tutees nonetheless reveals that Jean-Paul, who is the oldest of the group (age 19;4) scores significantly higher than Alexandra (17;6) and Zelda (18;3) but slightly below Ekondu, who is around one year younger (18;2).

It seems more likely that the differences in proficiency can be attributed partly to the fact that Jean-Pierre and Ekondu, who produced the most syntactically complex texts (and incidentally are siblings), indicated the strongest connection with Dutch in the focus group, reporting that they socialize much in Dutch outside of school and consider themselves to be fully bilingual. Conversely, Zelda, whose writing was least syntactically complex, made a point of presenting herself as French-speaking, rather than bilingual ("my Dutch is not great"). This aligns with Ortega's (2003) observation in her research synthesis of college-level ESL/EFL writing. She found that the writing of learners in settings where English is the dominant language in society shows more syntactic complexity than that of learners who acquire it as a foreign language, which she associates with access to the target language and opportunities to use it outside the classroom.

Benchmarking these data against a normative database of syntactic complexity for learners of different ages, linguistic backgrounds and educational settings would allow them to be put in perspective. However, some time ago, van Wijk & Kempen (1982) observed that this is lacking for Dutch, a lacuna that has not been filled since. Nippold (2014) still observes this same paucity of normative data for the field of writing research in general, regardless of language. Studies with a similar demographic and type of writing can nonetheless act as a point of reference to allow some interpretation. In a study of a corpus of 600 argumentative texts by students in higher education, Ai & Lu (2013) report an average MLTU of 17.07 for native speakers and 14.17 for non-natives, who were Chinese English major students in China (no SD reported). In a similar 2015 study, they expanded their collection of non-native essays to include speakers of a variety of languages (again English major students in higher education) (n: 1400, of which native speakers: 200) and found an average MLTU of 17.31 (SD 3.21) and 16.76 (SD 4.38) for native and non-native speakers respectively. Research

on syntactic complexity in bilinguals is scarce, and research on it in the writing of bilingual secondary pupils non-existent. Strid (2016), in a study on the linguistic complexity of expository writing in American 5<sup>th</sup> graders (age 10-11), did find that the writing of monolingual pupils was more complex than that of bilinguals (12.88 vs. 9.78, no SD reported). Even though it is difficult to compare the MLTU of my tutees to those reported in other studies because of differences in age and context, we can observe that their complexity appears quite low and in particular the texts of Zelda show a syntactic complexity that is at the level that Strid (2016) finds in pupils seven years her junior.

### **Lexical complexity**

Similar to the observation for syntactic complexity, the data do not show a consistent impact of the intervention, as two pupils show negative change and two positive. The disparity in ability is equally visible, with Jean-Paul and Ekundu obtaining comparable scores (an average of 78.42 and 76.85) and again showing greater complexity than Alexandra (68.34) and Zelda (44.725). To put this into perspective, I refer to a study by Verheijen (2016) for which she calculated the MTLT for a collection of "school writings" (school essays from students in Dutch secondary and tertiary education) and found a mean of 76.10 (SD 2.23). She did not report separate MTLT data for every type of education nor provide details on the type of writing or background of participants (presumed to be native Dutch speakers). However, in the absence of any other data for MTLT in Dutch texts by secondary pupils, and because her corpus included both texts below (lower secondary) and above (university) my tutees' level, we can use her mean to give a rough indication of an order of magnitude. McNamara, Crossley & McCarthy's 2010 study on a corpus of argumentative texts by American undergraduate students (native speakers writing in English) shows that essays considered high-quality by raters using holistic scales have an average MTLT of 78.71 (SD 13.19) and low-quality essays one of 72.64. They further establish that MTLT can function as a proxy for overall text quality, a finding which has been confirmed in subsequent research (Treffers-Daller 2013). We can gather from the aforementioned studies that Alexandra and Zelda's lexical diversity is likely lower than could be expected, although the peculiarity of their educational and linguistic situation makes it difficult to compare them with other

pupils. Additionally, research points in the direction of their lower lexical diversity being indicative of a lower language proficiency overall.

### 10.2.2 ACCURACY

The accuracy data reveal a similar picture to the data on complexity. There is no clear impact of the intervention on the accuracy of pupils' writing: it increases in two pupils but decreases in the two others. We once again find strikingly divergent results across individuals and, interestingly, we can observe a pattern with regard to the tutees' language proficiency. Alexandra's and Zelda's scores are again at the lower end (average 55% and 52%), implying that approximately one out of two sentences they produce is flawed. Jean-Paul and Ekundu's texts contain on average 20% more error-free T-units with similar mean scores of 70% and 73%. A comparable trend is thus visible in the data for syntactic and lexical complexity and accuracy: low scores for one dimension correlate with poor performance in another.

Again in line with what has been observed for complexity, van der Walt & Hattingh (2011) point out a lack of comparative data. More fundamental (i.e. how to calculate accuracy in writing) and policy-oriented research (i.e. what level of accuracy should learners be able to attain), particularly for multilingual adolescent learners, could provide data that can act as a benchmark.

### 10.2.3 FLUENCY

The data for fluency show the most coherent picture out of all the CAF measures. Even though not all tutees wrote more words post-intervention than pre, three produced more keystrokes per minute (and Ekundu's rate decreased only minimally) and all of them paused less frequently. The qualitative data show an interesting dynamic between how strongly a pupil felt about the topic and the number of words they produced. Alexandra and Zelda, who wrote more words for the second assignment than for the first, both admitted not having a distinct opinion on the first prompt on organ donation ("it's

hard to have an opinion on that”, Alexandra) but report they felt focused for the second (on stress at school), because their inspiration flowed freely. Conversely, Ekundu “didn’t really have an opinion” about the post-test topic, for which they produced fewer words, and Jean-Paul “felt pretty uninspired about the topic, actually”. The interaction between inspiration, ensuing focus and ultimately text length is clearly and consequently evident in the data. Because of the sample size this is of course only reported at a descriptive level, without the support of inferential statistics. Nevertheless, it mirrors the correlation Tedick (1990) found between subject knowledge and overall length. In a comparative study of argumentative writing (n: 105) by graduate students at a US university writing in English as their second language, she found significant differences between the number of words they produced in a general piece of writing and one related to the subject they were studying ( $p < .05$ ). She did find, however, that more advanced writers were less influenced by topic knowledge and produced texts of similar length for both assignments. This is also the case with the tutees: the fluency of the more advanced writers of the group, Ekundu and Jean-Paul, as expressed in number of words, fluctuates less (2% and 13%) than that of Alexandra and Zelda (24% and 29%). It should be noted that topic engagement (i.e. how *strongly* one *feels* about it), as reported by the tutees in this study, and knowledge (i.e. how *much* one *knows* about it), examined by Tedick, are different dimensions yet both can potentially influence text length through increased inspiration and motivation to write.

We now turn from the product-based production side of fluency to the process-based pausing behaviour. We find a general decline in P-bursts, corresponding to an increase in writing bursts and consequently a higher number of words per burst. We can observe this evolution in all tutees, ranging from a marginal change for Jean-Paul (of 2%, hovering around 6 words per burst) to a surge of 59% and 71% in Ekundu and Zelda’s writing. We should be mindful of the fact that a low score in the pre-test will more easily give rise to substantial percentual change, as a change of 1 word is a more marked difference in a P-burst of 2 words than in one of 6. Again we find Alexandra and Zelda score towards the lower end of the range, with a mean burst length of 3.35 and 2.83 respectively. To put this into perspective, Friedlander (1989) reports an average of two-word P-bursts in Chinese ESL learners

(cited in Chenoweth and Hayes 2003) and Chenoweth and Hayes (2003) find one of 2.41 in undergraduate students of German and French as a Foreign Language after three to five semesters of instruction. They observe an increase in words/P-burst as students' language proficiency increases and find that the average for these same students writing in their L1 is 3.7. The fluency of Alexandra and Zelda can thus likely be assessed as rather low. Although Chenoweth and Hayes' (2003) sample size is small (n: 13), their common-sense observation that writers produce texts more fluently in their L1 than in an L2 or FL is corroborated by several studies (van Waes & Leijten 2015 provide an overview). In the current study, having the tutees perform the same tasks in French would have added depth to the fluency data by allowing for comparison and should therefore be considered an opportunity for further writing intervention research with multilingual learners.

### 10.3 WHAT IS THE IMPACT OF THE INTERVENTION ON PUPILS' WRITING SELF-EFFICACY IN DUTCH?

The second research question takes us from how *good* the tutees' writing actually *is*, i.e. the *proficiency* addressed in the previous section, to how *confident* they *feel* about it, i.e. their *self-efficacy*. The focus group showed pupils were positive about the impact of the intervention on their self-efficacy. There was a general sense that, even though they still felt writing was hard and even "tiring" (Zelda), the intervention had made it easier to produce pieces of opinionated writing: "if you follow the method step by step, you're fine" (Nicolas). Several strategies from the OREO approach were mentioned as instances of how it had made writing easier for them, thereby increasing their self-efficacy. This is in accordance with what was established in the theoretical framework, viz. that more self-regulation can positively influence self-efficacy (Zimmerman & Risemberg 1997, Pajares 2003). However, to be precise, it is the *potential* for self-regulation that seems to make pupils feel more self-efficacious. Because of the scaffolded approach that was taken and the fact that the intervention had only been implemented for a limited time, we still found ourselves in a phase where most of the strategies would be modelled or initiated by me. Pupils acknowledged that the stage they were in was not yet of that of enactive, self-regulated strategic behaviour because, as Nicolas put it:

*Yes, 'cause you know, it's a new method. You haven't yet... Your body hasn't accepted it yet, your brain hasn't accepted it yet. When you're writing a text now, you'll think about it, but one month from now, if they're going to tell you "the OREO method"...*

The theoretical framework equally established an influence of self-efficacy on proficiency. We do indeed find that (out of the pupils for whom proficiency data are available) the pupil who reports the lowest self-efficacy in general (Table 3) is also the one with the lowest proficiency scores (Zelda) and that Jean-Paul and Ekundu, whose writing scored highest for CAF measures, feel most self-efficacious. Interestingly, Alexandra, whose proficiency was also appraised as low, feels more self-efficacious than Zelda (68.80 vs. 60.29). This is most clearly evident in the data for linguistic self-efficacy, which features items on spelling, punctuation, grammar and vocabulary. Alexandra (75.31) feels as self-efficacious as Jean-Paul and Ekundu (74.62 and 76.56), even though at the performance-level, her results are similar to Zelda's. Although no correlation can be established on the basis of these limited data, it is interesting to point out that Alexandra feels much more positive about writing (averaging 4.75 on the 5-point Liking Writing Scale, compared to 3.12 for Zelda), saying that she "has always liked writing and still like[s] it [after the intervention] but just find[s] it easier". Alexandra thus shows *intrinsic interest*, i.e. when learners value "an activity or skill for its inherent properties rather than for its ultimate external ends" (Zimmerman 2002: 14) and *intrinsic motivation*, when they "engage in activities for their inherent satisfactions" (La Guardia & Ryan 2002: 201), variables which have been shown in earlier social-cognitivist motivation research to influence self-efficacy (La Guardia & Ryan 2002, Zimmerman 2002).

Table 3 Self-efficacy

	AVERAGE					META S-E				
	PRE	POST	AVG	CHANGE		PRE	POST	AVG	CHANGE	
AXELLE	64.67	72.93	68.80	8.26	13%	61	71	66	10.00	16%
EKELLE	73.40	79.53	76.47	6.13	8%	74	72	73	-2.00	-3%
JEAN-PAUL	73.30	74.79	74.05	1.49	2%	74	75.5	74.75	1.50	2%
KAWTAR	60.35	59.60	59.97	-0.75	-1%	54	50.5	52.25	-3.50	-6%
TAYLAN	48.66	49.36	49.01	0.70	1%	45	50	47.5	5.00	11%
ZOE	60.29	60.29	60.29	0.00	0%	51	56	53.5	5.00	10%
AVERAGE	63.44	66.08	64.76	2.64	4%	59.83	62.50	61.17	2.67	4%

	TEXT S-E					LINGUISTIC S-E				
	PRE	POST	AVG	CHANGE		PRE	POST	AVG	CHANGE	
AXELLE	58.75	67.5	63.125	8.75	15%	74.38	76.25	75.31	1.88	3%
EKELLE	71.25	85	78.125	13.75	19%	70.63	78.63	74.63	8.00	11%
JEAN-PAUL	76.25	71.25	73.75	-5	-7%	78.75	74.38	76.56	-4.38	-6%
KAWTAR	50	52.5	51.25	2.5	5%	62.50	56.25	59.38	-6.25	-10%
TAYLAN	45	42.5	43.75	-2.5	-6%	58.75	50.00	54.38	-8.75	-15%
ZOE	60	55	57.5	-5	-8%	55.00	60.00	57.50	5.00	9%
AVERAGE	60.21	62.29	61.25	2.083333	3%	66.67	65.92	66.29	-0.75	-1%

## 10.4 WHAT IS THE IMPACT OF THE INTERVENTION ON PUPILS' STRATEGY USE WHEN WRITING IN DUTCH?

The audio data collected during the stimulated recall and ensuing interview were transcribed and coded for their use of strategies. The strategy descriptors used for the coding were collected from Hwang and Lee's (2017) English Writing Strategy Inventory (EWSI) -which had also been used as survey items- and the strategies from the OREO approach. This coding instrument was applied to four stimulated recall transcriptions to assess its usability and a final coding sheet was drawn up on the basis of this try-out (background on this is provided in Appendix I).

For an initial, more holistic appraisal of the impact of the intervention on the use of strategies, we turn to the focus group findings. In the previous section on self-efficacy I have already indicated that pupils reported using more strategies post intervention; Jean-Paul phrased it as follows:

*Before this assignment my method was the favella method. [others laugh] No, really, I'm being honest, I'm being honest. That was how I started, actually, so really just straight away my introduction, my arguments, my middle, my conclusion: [in English] "It was done, it's a wrap.". Then you showed us the OREO-method and then I have, perhaps not for the very first time but in any case for one of only a few times, made an outline for my arguments etcetera and not started with the introduction for once because usually I start with the introduction.*

The favella method Jean-Paul is referring to is a reference to the image every OREO class would start with (Figure 30): one of systematic, carefully thought-through urban planning contrasted with a favella. This comparison would be used to invite pupils to reflect on the importance of planning in writing and to visualize what a lack of planning results in. More generally, the visual component of the OREO-method was evaluated positively by the tutees, with Alexandra, too, mentioning that in her post-test interview: "[she] thought of the PowerPoint slide from the OREO-method with the three Oreos, introduction, middle, conclusion [Figure 31].".



Figure 30 The importance of planning

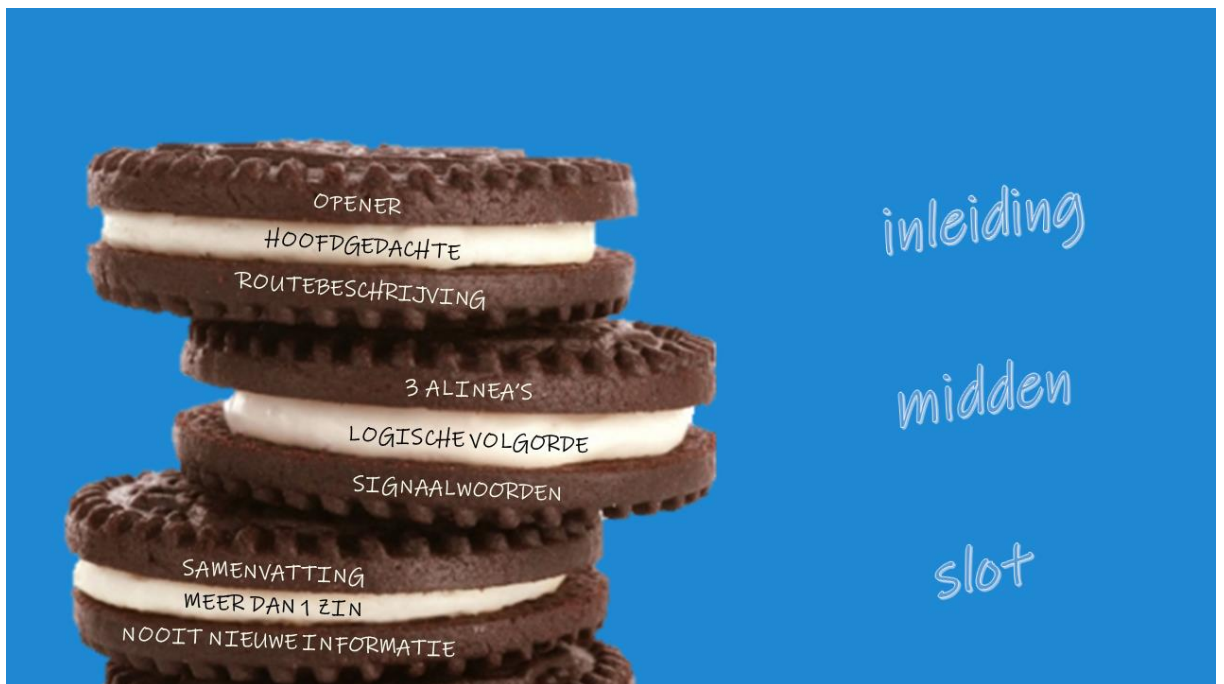


Figure 31 A way of structuring text

Other strategies that were mentioned pertained mostly to the structure of the text, including knowing how to organize one's text and what to look out for in the different sections (e.g. no new information in the conclusion). This ties in with the feedback on the OREO-method as a whole, which was

perceived as “very clear” (Zelda) and “well-structured” (Tarik), “giving a better vision while writing” (Kadifa), so pupils felt “it’s better organized in [their] heads” (Kadifa). Students indicated they had gained new insights (starting paragraphs with a topic sentence, structuring one’s thoughts using main and sub-questions) but were already familiar with other aspects of the intervention (related to the planning of a writing assignment). This is because the OREO-strategies partly overlap with the OVUR-approach, the method prescribed by the curriculum (Ministerie van Onderwijs 2012). As discussed earlier (section 5.4.1), OVUR (*Orienting, Processing, Executing and Reflecting*) is a mnemonic which combines strategies at a meta-level; it gives pupils guidance on how to approach the writing process as a whole and as such it is similar to the OREO-meta-strategies *Analysing assignment, Exploring the topic* and *Revise thoroughly at the end*. OVUR-instruction starts in the first year of secondary school and loosely follows the pattern of decreasing scaffolding that is typical of many approaches to strategy instruction (Harris et al. 2002). This caused Kadifa to question whether anybody still uses it and Nicolas to state they “have arrived at a certain level where [they] no longer have a method”. Ekundu qualifies this, however: “I think we do use it subconsciously. You used to have to write it down on your sheet: the O and then... Now it is subconscious.”. The OREO method could have the potential to rekindle explicit metacognition in writing in a stage where pupils are no longer provided with strategic support yet are still struggling.

Continuing this contrastive discussion of OVUR and OREO, we find that pupils were particularly positive about the Reflection component of the OREO-method. This stage was typified as underdeveloped in the OVUR approach (chapter 5.4: How should writing be taught?), which requires pupils to reflect but does not provide any tools or guidance on how to do so. For the intervention pupils were introduced to the *Schrijfhelp Academisch Nederlands* (SAN: see section 7.1.3, Revision and editing) which was well-received to the extent that pupils considered it to be one of the things they would most likely continue to use in the future. It is uncertain to what extent the aspirations of SAN to go beyond the more mechanical aspects of writing, were realized in this intervention. Pupils appreciated its ability to raise awareness on (albeit rather superficial) features such as sentence

length, spelling errors and repetition. However, Kadifa felt that “the complexity index was pretty interesting, but after [she] saw [her] score, [she] didn’t edit anything because [she] didn’t know what to add. It was interesting to know but it didn’t help [her] because it wasn’t explained.”. This illustrates the limitations of SAN and digital writing aids in general, which are not yet developed to provide strategic support (Strobl et al. 2019) and is in line with Wyer’s (2014) finding that pupils using SAN make least progress in the stylistic dimension and the most in surface features. Even though using digital aids for text revision was already heralded as a tool to enhance revision strategies in the 1980s (Kurth 1987), the pupils’ reaction corroborates the idea that they are a promising way to provide formative feedback (MacArthur et al. 2016) but still require further developing in order to deliver on this promise.

Further, with regard to revision and in particular the use of a dictionary, all data indicate very low self-regulated strategic behaviour. Pupils may have appreciated the user-friendly interface of SAN which generates feedback for their entire text at the click of a button, but they do not use a(n online) dictionary when in doubt on the spelling/meaning of a word or when looking for a synonym. No pupil, in either pre- or post-test, used a dictionary and the quantitative data confirm that this is also uncommon in their regular writing behaviour outside of test conditions (average pre- and post-scores of 2.5 on a 5-point Likert scale for the item *I use a Dutch dictionary to correct my spelling*). In the interview after the writing assignment, pupils indicated that they “went by their feeling” when in doubt on what word to use (Ekundu) and that they find synonyms through “thinking” (Zelda).

Scrutinizing the qualitative data more closely, we find some instances of increased strategy use. To make this observation, I compared the stimulated recall and interview coding sheets pre- and post-intervention to look for patterns at the level of the different strategic behaviours and the individual pupil. Certain strategies were already well developed before the intervention and continued to be employed afterwards. Instances of analyzing the assignment, goal and target audience were found in all pupils, both pre- and post-intervention (“you have to approach it differently, you have to come up

with stronger arguments and more numbers for youngsters” (Ekundu, post interview). These dimensions would typically be reflected on as part of the *Orientation* phase in the OVUR-strategy and can hence potentially lend credence to Ekundu’s earlier assertion that pupils have fully integrated this step.

The following strategies that were reported post-test were not observed before the intervention:

Extra attention for structuring devices (Alexandra)

Topic sentence (Alexandra, Ekundu)

Give reasons, explanation or examples (Alexandra)

I build reasoning using rule of three & reflect on the middle (consists of three paragraphs in a logical order and makes use of signposting expressions) (Ekundu)

I build reasoning using rule of three & reflect on the conclusion (consists of a summary, is always more than 1 sentence and never contains new information) (Jean Paul)

From this we can infer two conclusions. First, all new strategic behaviour corresponds directly to one of the strategies as formulated in the OREO-approach. Second, they are situated at the level of the paragraph or the structure of the text as a whole. This dimension might have been addressed in previous teaching, but not in the same systematic and continued way as the OVUR meta-strategies. As was the case with revision, the OREO method may thus have the potential to fill a lacuna.

Whereas the qualitative data suggest a modest increase in the use of strategies, no considerable change can be attested quantitatively. The overall use of strategies as reported in the survey pre- and post-intervention stays more or less the same (Table 5), with 4 pupils showing a minimal decrease, 1 staying the same and one reporting a small increase.

Finally, the stimulated recall data invite further methodological considerations. Even though Alexandra, Ekundu and Jean-Paul all show more strategy use after the intervention (Table 4), Zelda is again the outlier: her post-test shows less strategy use and overall she shows the least strategic behaviour. The reader may remember that she was shown previously to have low proficiency and low self-efficacy. This begs the question to what extent Zelda is effectively using fewer strategies and to what extent the methodology used to capture them, which depends on the pupil’s linguistic

proficiency, does not allow her to demonstrate them fully. Her survey results are similar to those of the other three tutees, supporting this hypothesis. Scrutinizing her qualitative data in detail, it is striking how her stimulated recall and interview transcript show an uneasiness when expressing herself in Dutch, with her explanations punctuated by “I don’t know” and “No clue”. In any case, Zelda’s data illustrate a call for vigilance in interpreting findings in the light of their methodological characteristics and, further, for careful reflection on how research can accommodate to participants with mixed L1s.

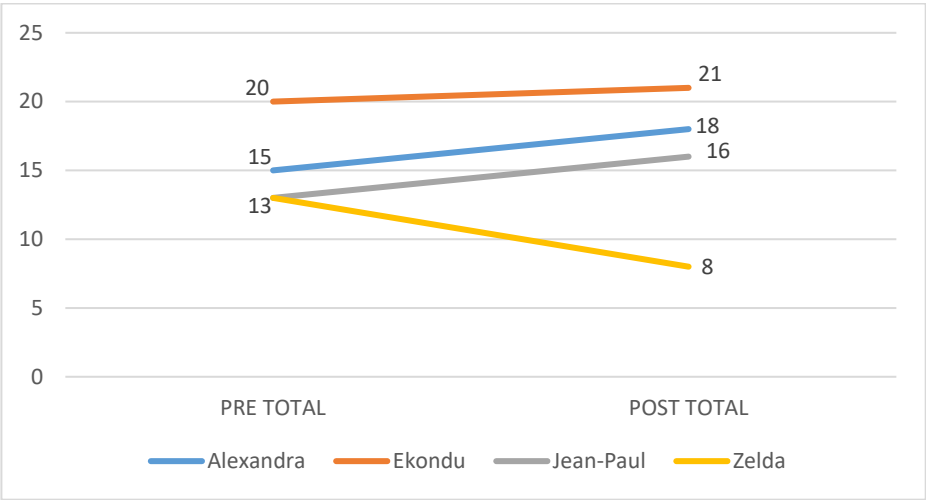


Table 4 Strategy use as reported in SR and interview

Table 5 Strategy use

	AVERAGE					META S-E				
	PRE	POST	AVG	CHANGE		PRE	POST	AVG	CHANGE	
ALEXANDRA	3.99	3.79	3.89	-0.20	-5%	4.17	4.17	4.17	0.00	0%
EKONDU	3.88	3.84	3.86	-0.03	-1%	3.33	3.33	3.33	0.00	0%
JEAN-PAUL	3.54	3.31	3.43	-0.23	-7%	4.33	3.83	4.08	-0.50	-12%
KADIFA	3.19	3.09	3.14	-0.10	-3%	2.67	3.17	2.92	0.50	19%
TARIK	2.26	2.24	2.25	-0.01	0%	2.17	2.83	2.50	0.67	31%
ZELDA	3.48	3.84	3.66	0.37	11%	3.33	3.83	3.58	0.50	15%
AVERAGE	3.39	3.35	3.37	-0.04	-1%	3.33	3.53	3.43	0.19	6%

	TEXT S-E					LINGUISTIC S-E				
	PRE	POST	AVG	CHANGE		PRE	POST	AVG	CHANGE	
ALEXANDRA	4.20	4.20	4.20	0.00	0%	3.60	3.00	3.30	-0.60	-17%
EKONDU	4.00	4.00	4.00	0.00	0%	4.30	4.20	4.25	-0.10	-2%
JEAN-PAUL	3.20	3.60	3.40	0.40	13%	3.10	2.50	2.80	-0.60	-19%
KADIFA	4.00	3.80	3.90	-0.20	-5%	2.90	2.30	2.60	-0.60	-21%
TARIK	2.40	2.00	2.20	-0.40	-17%	2.20	1.90	2.05	-0.30	-14%
ZELDA	3.40	3.80	3.60	0.40	12%	3.70	3.90	3.80	0.20	5%
AVERAGE	3.53	3.57	3.55	0.03	1%	3.30	2.97	3.13	-0.33	-10%



# CONCLUSION

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# 11 A LEARNING JOURNEY THROUGH PRACTITIONER-RESEARCH

This dissertation has allowed me to explore the possibilities of teacher-research by acting as a conduit between theory and practice. In the course of this project I have cooperated with the teachers and management of my school, reached out to the wider teaching community and drawn on the advice of several researchers in the field. My learning journey has not only equipped me with subject-specific insights and methodological know-how but also with more generic skills. This is particularly useful as I have evolved from a teaching role to a role in which I offer coaching on language teaching. In this new role, I now intuitively apply some of the generic skills I acquired, such as critically consulting the available literature and employing a methodical approach. As such I can conclude that the hyphenation of my professional identity, from practitioner to practitioner-researcher, has been a rewarding yet challenging undertaking that is bound to positively influence my future development as an educator.

## **Ethics**

This study was set up in accordance with the Ethical Guidelines for Educational Research from the British Educational Research Association (2018) and has proactively ensured an ethical approach throughout its execution.

Informed consent was sought from all parties involved, including management, teachers and pupils. At the start of every interview or focus group, the aim of the research was explained and participants were explicitly asked for their approval to record the session. In the first cycle of this research, when

a number of tutees was selected from a class group, potential participants were given a briefing prior to consenting to take part. They were informed their participation was not compulsory and that they had the right to withdraw at any stage.

In the second cycle an entire class group was involved in the programme. It was decided not to split up the group because of its small size and it was felt not advisable for some students to miss out on an intervention which could benefit all of them. Pupils were told that the intervention's purpose was twofold: didactic, viz. being taught to write better texts, and academic, viz. participating in a study. It was made clear to them that, even though their participation in the former was obligatory -being taught during class time-, they were under no obligation to take part in the latter. All tutees were willing to cooperate. In order not to add to their workload, all research-related activities were organized during class time. Their anonymity, as well as the teachers' and school's, has been ensured throughout the this thesis, using pseudonyms and omitting the school's name and identifiable features.

All surveys were organized online and taken anonymously but included date of birth as an anonymous identifier to allow for within subject comparison. All recordings were made with a password-protected device and all data that was generated in the course of this study was password-protected.

### **Collaboration and dissemination**

This thesis hinges on multiple forms of cooperation with teachers at my school and also features dissemination to the wider teaching community. Several of the school's Dutch teachers were involved by interviewing them and the whole department was briefed on the progress of my thesis during our departmental meetings. As my research was sparked by an email from one of them and writing proficiency is a major concern for all of them, there was a lot of enthusiasm and curiosity for it. Even though I am no longer teaching at the school, I will go back to present the findings from this study to the Dutch teachers in the 2020-2021 school year and offer suggestions on how to implement them.

The economics teacher perceived the cross-curricular collaboration as an added value for her professional practice.

Moreover, as I combined my teaching with a part-time position as a teaching assistant at a Flemish university, I seized this opportunity to give a presentation to my colleagues on how my research could be of relevance to them. I also wrote an article for *Fons*, the journal for Dutch teachers in Belgium, to share some evidence-based practices for writing instruction (Appendix J). Finally, I have made the OREO-method available to teachers by sharing it on Klascement ([klascement.net](http://klascement.net)), the largest website for sharing teaching resources in Flanders.

The conception of this study also drew on collaboration with academics, more specifically from the field of writing research in the Dutch-speaking world. Because my supervisor did not speak Dutch (yet offered excellent support in every step of the process), this was a welcome addition. Catherine van Beuningen from the University of Applied sciences of Amsterdam introduced me to stimulated recall and supported with me questions related to the automatic processing of CAF-measures. Luuk Van Waes from the University of Antwerp helped me out with the use of InputLog to capture the writing process. I also presented the preliminary findings from this study at the Colloquium Neerlandicum, a conference for Dutch as a foreign language, to get feedback from researchers working on similar topics. Here I got in contact with Lieve De Wachter (Catholic University Louvain), whose advice led me to incorporate the digital writing aid that was developed under her supervision.

## 12 CONCLUSION

This dissertation has measured the impact of a writing intervention on the writing of multilingual adolescents writing in Dutch, their language of instruction. Overall, we can summarize this impact to be modest but promising. From the perspective of the school and wider educational context, however, the effect of this study is considerable, as it has the potential to transform practice. This conclusion will also suggest various avenues for further research which could improve the intervention, subject it to further evaluation and expand its scientific framework.

First, concerning the influence of the intervention on the three dimensions I have examined - *proficiency*, *self-efficacy* and *use of strategies* - I have urged caution because of the limited length of the intervention and low number of participants. For these reasons, it was difficult to generate profound change and it is impossible to make definitive claims regarding causation or statistical significance. The language production of the tutees pre- and post-intervention did not show considerable changes in complexity and accuracy, but a positive trend was observed for fluency. Several instances of increased self-efficacy could be observed in the focus group data and the stimulated recall and interview showed an increase in the type of strategies used. This change was not visible in the quantitative data, however. It is worth exploring whether continued implementation over a longer period of time can capitalize on the motivational effects and increased strategy use attested in the qualitative data.

Secondly, the OREO method and the research and collaboration that led to it have proved useful to the *school* in several ways. Most significantly, this study has shown that, in the absence of any form of standardized testing, pupils' command of language skills remains unclear. It follows that, even

though teachers may have assumptions based on their own intuitions and testing, there is no rigorously attested insight into individual differences in proficiency and ensuing remedial needs. It is difficult to reconcile this with the vision of the school management that the remediation should be tailor-made and indeed with the highly individual nature of any writing endeavour. In order for the additional remediation period to cater to this and be more efficient, the school could consider making use of benchmarked proficiency measures to form small groups of pupils with similar profiles.

Furthermore, the OREO method can provide a framework to streamline the teaching and remediation of writing; a task which is now left entirely at the discretion of the individual teacher and can be daunting for novice teachers in particular. The cross-curricular way in which the writing intervention was organized – which was positively evaluated by both teacher and pupils – can be explored further in regular and remediation Dutch classes. This can enrich the subject teaching through employing writing as a tool to learn. This study has shown that this is already prescribed by policy but is a blind spot in current teaching in at least one of the subjects. Allocating the language dimension of the writing process for content-based assignments to the language classroom also ensures the workload of the subject teacher does not increase when she implements meaningful forms of writing and that pupils get expert language support in the writing process.

A final finding related to my specific school is that pupils showed very low self-regulation with regard to using resources such as a dictionary. It should be addressed to what extent this finding can be generalized to the rest of the school. Actions, such as the introduction of a schoolwide Self-Regulated Strategies Development-based emphasis on dictionary use, may accordingly be advisable.

Thirdly, the suggestions my research can offer go beyond the school and extend to the *wider educational context*, i.e. the teaching of writing in Flemish education. By offering an accessible and comprehensive framework for the teaching of writing, the OREO method could be a step towards a more meaningful, reflected and effective approach for other schools, too. Its merit is far from

established at this point, but its foundations, including its cross-curricular approach, can provide a starting point for a discussion on what constitutes good writing instruction, which is now considered to be lacking by inspection and scholars (see: chapter 1, Introduction). Further research – at a larger scale, over a longer period of time and including control-groups – is now needed to confirm if the explicit metacognitive focus in the OREO-method can foster metacognitive awareness and self-regulation. This may be particularly relevant in the later stages of secondary school, as this study suggests that pupils may have integrated part of the prescribed procedural strategy-based OVUR-method by then, but renewed explicit attention for the planning of a text could rekindle their metacognitive awareness.

Additionally, this study has found that pupils particularly demonstrated increased use of and appreciated strategies for structuring one's text and access to a digital aid for revision. These are both shortcomings in the traditional OVUR-method. Even though the intervention may thus improve planning (viz. planning the structure of a text) and revision, it does not feature attention for the third stage posited in the theory of writing (see 5.3, Overview of writing theories), translation. The low proficiency scores of some of the tutees indicate that dedicated attention to this dimension is still very much needed, even for learners at the end of secondary school. Any follow-up of this study should hence have an eye for this gap.

A final reflection pertains to a call for *further research* to establish normative data for writing proficiency measures, which was identified both in this study and various other before it. Further research on measures of complexity, accuracy and fluency should establish their validity and correlation with overall text quality. This can in turn inform subsequent studies that seek to create normative databases. They are a prerequisite to realize the more precise insight into pupils' proficiency which, earlier in this Conclusion, I established as essential for schools. In order for this to be useful for my context, special attention should be given to multilingual learners and their different developmental patterns in various linguistic (FL/SL) settings. In particular, in the Flemish educational

landscape, in which no form of standardized testing exists, schools can benefit from this, not only to put the performance of pupils in perspective but also to gain insight into the individual progress they make.

In summary, this dissertation has focused on developing a method to improve the *dramatische taalvaardigheid* that is apparent in the writing of some of the pupils at our school. It has not been able to fully achieve this daunting task at this stage, but its research and development have had an irrefutable impact on the school, teachers and pupils involved in it, in particular on myself. Most importantly, this transformative piece of practitioner-research should be considered a passionate plea for the awareness of the added value that arises at the crossroads between educational theory and practice.

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# REFERENCES

- Ai, H. & Lu, X. (2013) A corpus-based comparison of syntactic complexity in NNS and NS university students' writing. In Ballier, N., Díaz, N. A., & Thompson, P. (Eds.) *Automatic Treatment and Analysis of Learner Corpus Data*. 249-264. Amsterdam, Netherlands: John Benjamins Publishing Company.
- Baddeley, A. (1986) *Working memory (Oxford psychology series no. 11)*. Oxford/New York: Clarendon Press/Oxford University Press.
- Bandura, A. (1977) Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84 (2), 191-215.
- Bandura, A. (1986) *Social foundations of thought and action: A social cognitive theory (Prentice-Hall series in social learning theory)*. Englewood Cliffs, N.J.: Prentice-Hall.
- Bandura, A. (2006) Guide for Constructing Self-Efficacy Scales. In: Pajares, F. and Urdan, T.S. (Eds.), *Self-Efficacy Beliefs of Adolescents*, Greenwich: Age Information Publishing, 307-337.
- Bangert-Drowns, R., Hurley, M., & Wilkinson, B. (2004) The Effects of School-Based Writing-to-Learn Interventions on Academic Achievement: A Meta-Analysis. *Review of Educational Research*, 74 (1), 29-58.
- Barbour, R. (2007) *Doing focus groups (SAGE qualitative research kit)*. London: SAGE.
- Baumfield, V., Hall, E., & Wall, K. (2008) *Action research in the classroom*. London: SAGE.
- Bereiter, C., & Scardamalia, M. (1987) *Psychology of written composition*. Hillsdale, N.J./London: Erlbaum.
- Biancarosa, C., & Snow, C. E. (2006) *Reading next—A vision for action and research in middle and high school literacy: A report to Carnegie Corporation of New York* (2nd ed.). Washington, DC: Alliance for Excellent Education.
- Boone, S., & Van Houtte, M. (2013) In Search of the Mechanisms Conducive to Class Differentials in Educational Choice: A Mixed Method Research. *The Sociological Review*, 61 (3), 549-572.
- Brandt, D. (2005) Writing for a Living: Literacy and the Knowledge Economy. *Written Communication*, 22 (2), 166-197.
- Brandt, D. (2009) *Literacy and learning : reflections on writing, reading, and society* (1st edition). Jossey-Bass, San Francisco, CA
- British Educational Research Association (2011) *Ethical guidelines for educational research* London: British Educational Research Association. [online] [https://www.bera.ac.uk/wp-content/uploads/2018/06/BERA-Ethical-Guidelines-for-Educational-Research\\_4thEdn\\_2018.pdf](https://www.bera.ac.uk/wp-content/uploads/2018/06/BERA-Ethical-Guidelines-for-Educational-Research_4thEdn_2018.pdf) [Accessed 4 April 2020]
- Brosnan, K., Grün, B., & Dolnicar, S. (2018) Identifying superfluous survey items. *Journal of Retailing and Consumer Services*, 43, 39-45.
- Brown, A.L., & Campione, J.C. (1981) Inducing Flexible Thinking: The Problem of Access. In: Friedman M.P., Das J.P., O'Connor N. (Eds.) *Intelligence and Learning. NATO Conference Series (III Human Factors)*, Vol. 14, Boston, MA: Springer.

- Bruning, R., Dempsey, M., Kauffman, D., & McKim, C., & Zumbrunn, S. (2013) Examining Dimensions of Self-Efficacy for Writing. *Journal of Educational Psychology*, 105, 25-38.
- Bruning, R., & Kauffman, D. (2016) Self-Efficacy Beliefs and Motivation. In MacArthur, C. A., Graham, S., & Fitzgerald, J. (Eds.), *Handbook of writing research* (Vol. 2, 11-25). New York, NY: Guilford.
- Bruzz (2016) Tweedeling in populariteit secundaire scholen: 'Ouders gaan af op reputatie'. [online] <https://www.bruzz.be/samenleving/tweedeling-populariteit-secundaire-scholen-ouders-gaan-af-op-reputatie-2016-03-07> [Accessed 14 May 2020].
- Bukta, K. (2013) *Rating English language learners' written performance*. Warschau/Berlin: De Gruyter.
- Bulgren, J., Deshler, D., & Lenz, B. (2007) Engaging Adolescents With LD in Higher Order Thinking About History Concepts Using Integrated Content Enhancement Routines. *Journal of Learning Disabilities*, 40(2), 121-133.
- Bulgren, J., Marquis, J., Lenz, B., Schumaker, J., & Deshler, D. (2009) Effectiveness of Question Exploration to Enhance Students' Written Expression of Content Knowledge and Comprehension, *Reading & Writing Quarterly*, 25 (4), 271-289.
- Bulgren, J., Marquis, J., Lenz, B., Deshler, D., & Schumaker, J. (2011) The effectiveness of a question-exploration routine for enhancing the content learning of secondary students. *Journal of Educational Psychology*, 103 (3), 578-593.
- Bulgren, J., Marquis, J., Deshler, D., Lenz, B., & Schumaker, J. (2013) The Use and Effectiveness of a Question Exploration Routine in Secondary-Level English Language Arts Classrooms. *Learning Disabilities Research & Practice*, 28, 156-169.
- Charters, E. (2003) The Use of Think-aloud Methods in Qualitative Research: An Introduction to Think-aloud Methods. *Brock Education: A Journal of Educational Research and Practice*, 12 (2), 68-82.
- Chenoweth, N., & Hayes, J. (2003) The Inner Voice in Writing. *Written Communication*, 20 (1), 99-118.
- Chi, M. (1997) Quantifying Qualitative Analyses of Verbal Data: A Practical Guide. *Journal of the Learning Sciences*, 6 (3), 271-315.
- Chenoweth, N., & Hayes, J. (2001) Fluency in Writing: Generating Text in L1 and L2. *Written Communication*, 18 (1), 80-98.
- Christie, F. & Derewianka, B. (2008) *School discourse [electronic resource] : learning to write across the years of schooling*, London ; New York: Continuum.
- Coertjens, L., Lesterhuis, M., Verhavert, R., Van Gasse, R., & De Maeyer, S. (2017) Teksten beoordelen met criterialijsten of via paarsgewijze vergelijking: een afweging van betrouwbaarheid en tijdsinvestering. *Pedagogische Studiën : tijdschrift voor onderwijskunde en opvoedkunde*, 94, 283-303.
- Cohen, L., Manion, L., & Morrison, K. (2018) *Research methods in education* (Eighth ed., Ebook central). London, England/New York, New York: Routledge.
- Coker, D., & Lewis, W. (2008) Beyond Writing Next: A Discussion of Writing Research and Instructional Uncertainty. *Harvard Educational Review*, 78 (1), 231-250.
- Coulmas, F. (2003) *Writing systems: An introduction to their linguistic analysis* (Cambridge textbooks in linguistics). Cambridge: Cambridge University Press.
- Cummins, J. (1979) Cognitive/academic language proficiency, linguistic interdependence, the optimum age question and some other matters. *Working Papers on Bilingualism*, 19, 121-129.

- Cummins, J. (2008) BICS and CALP: Empirical and Theoretical Status of the Distinction. In Street, B. & Hornberger, N. H. (Eds.). *Encyclopedia of Language and Education, 2nd Edition, Volume 2: Literacy*. (71–83). New York: Springer Science + Business Media LLC.
- Curry, K. (1997) *A Comparison of the Writing Products of Students with Learning Disabilities in Inclusive and Resource Room Settings Using Different Writing Instruction Approaches*, (Doctoral dissertation) Retrieved from ProQuest Dissertations and Theses.
- Dataloep (2020) *Dataloep – Interactieve applicatie*. [online] <http://dataloep-publiek.vlaanderen.be> [Accessed 30 June 2020].
- De Fraine, B., & Van Damme, J. (2017) *Het Vlaams lager onderwijs in PIRLS 2016 – Begrijpend lezen in internationaal perspectief en in vergelijking met 2006*. [online] [data-onderwijs.vlaanderen.be/documenten/bestand.ashx?id=10983](http://data-onderwijs.vlaanderen.be/documenten/bestand.ashx?id=10983) [Accessed 11 April 2018].
- De La Paz, S. (1999) Self-Regulated Strategy Instruction in Regular Education Settings: Improving Outcomes for Students With and Without Learning Disabilities, *Learning Disabilities Research & Practice*, 14 (2), 92–106.
- De La Paz, S. (2001) STOP and DARE: A Persuasive Writing Strategy. *Intervention in School and Clinic*, 36 (4), 234–243.
- De La Paz, S., Swanson, P. N., & Graham, S. (1998) The contribution of executive control to the revising by students with writing and learning difficulties. *Journal of Educational Psychology*, 90, 448–460.
- De Larios J.R., Murphy L., Marín J. (2002) A Critical Examination of L2 Writing Process Research. In Ransdell S. & Barbier ML. (Eds.) *New Directions for Research in L2 Writing*. Studies in Writing, Vol 11. Springer, Dordrecht
- De Moor, A., & Colpaert T. (2019) Taal telt. Ook bij Odisee-studenten. In Forum Taalbeleid en Taalondersteuning Hoger Onderwijs, *Taalbeleid en taalondersteuning: wat werkt? Inspiratie en praktijkvoorbeelden uit het hoger onderwijs* (267–278). Leuven: LannooCampus.
- De Wachter L., & D'Hertefelt M. (2013) Schrijfhelp Academisch Nederlands. Een digitale schrijfhelp voor studenten. Presented at the Taaldag VRT-Taalunie 'Taal scheidt kansen', Antwerpen, 5 November 2013.
- De Wachter L., & D'Hertefelt, M. (2014) Een digitale schrijfhelp voor studenten ter bevordering van het schrijfproces: op weg naar een meer efficiënte student-docent-interactie?. In *Verzamelde werken van Leerling-docent-interactie bij schrijven in de vakken: een ontmoeting tussen wetenschap en praktijk*. (75–79).
- De Wachter, L., Heeren, J., Marx, S., & Huyghe, S. (2013) Taal: Noodzakelijke, Maar Niet Enige Voorwaarde Tot Studiesucces. Correlatie Tussen Resultaten Van Een Taalvaardigheidstoets En Slaagcijfers Bij Eerstejaarsstudenten Aan De KU Leuven. *Levende Talen Tijdschrift*, 4 (14), 28–36.
- Dörnyei, Z. (2005) *The psychology of the language learner: Individual differences in second language acquisition*. Mahwah, NJ: Lawrence Erlbaum.
- Dörnyei, Z., & Taguchi, T. (2010) *Questionnaires in second language research: Construction, administration, and processing* (2nd ed., Second language acquisition research. Monographs on research methodology). New York/London: Routledge.
- Education In Belgium (n.d.) *Cultural Divisions in Belgium*. [online] <https://educationinbelgium.weebly.com/cultural-divisions-in-belgium.html#> [Accessed 16 May 2020].
- Eissa, M. (2017) The effectiveness of a program based on self-regulated strategy development on the writing skills of writing-disabled secondary school students. *Electronic Journal of Research in Education Psychology*, 7(17).

- Ellis, R., & Barkhuizen, G. (2005) *Analysing learner language* (Oxford applied linguistics). Oxford: Oxford University Press.
- Ellis, R., & Yuan, F. (2004) THE EFFECTS OF PLANNING ON FLUENCY, COMPLEXITY, AND ACCURACY IN SECOND LANGUAGE NARRATIVE WRITING. *Studies in Second Language Acquisition*, 26 (1), 59-84.
- Ericsson, K., & Simon, H. (1984) *Protocol analysis: Verbal reports as data*. Cambridge, Mass: MIT Press.
- Foerst, N. M., Klug, J., Jöstl, G., Spiel, C., & Schober, B. (2017) Knowledge vs. Action: Discrepancies in University Students' Knowledge about and Self-Reported Use of Self-Regulated Learning Strategies. *Frontiers in psychology*, 8, 1288.
- Fonteyn, M., Kuipers, B., & Grobe, S. (1993) A Description of Think Aloud Method and Protocol Analysis. *Qualitative Health Research*, 3 (4), 430-441.
- Foster, P., & Wigglesworth, G. (2016) Capturing Accuracy in Second Language Performance: The Case for a Weighted Clause Ratio. *Annual Review of Applied Linguistics*, 36, 98-116.
- Friedlander, A. C. (1989) The writer stumbles: Some constraints on composing in English as a second language. (Doctoral dissertation, Carnegie Mellon University, 1989). *Dissertation Abstracts International*, 49, 11A.
- Gaies, S. (1980) T-Unit Analysis in Second Language Research: Applications, Problems and Limitations. *TESOL Quarterly*, 14 (1), 53-60.
- Galle, C. (2017, 31 May). Hellhole Brussel? Het kan ook anders. *De Morgen*, p.15.
- Gardner, R. (1985) *Social psychology and second language learning: The role of attitudes and motivation* (Social psychology of language ; 4). London ; Baltimore, Md.: E. Arnold.
- Gass, S. M., & Mackey, A. (2000) *Stimulated Recall Methodology in Second Language Research*. Mahwah, N.J.: Routledge.
- GO! Onderwijs van de Vlaamse gemeenschap (2014) *Leerplan secundair onderwijs - AV Nederlands*. Brussels: GO! Onderwijs van de Vlaamse gemeenschap.
- Graham, S. (2006) Writing. In Alexander, P. & Winne, P. (Eds.), *Handbook of educational psychology* (457-478). Mahwah, NJ: Lawrence Erlbaum Associates.
- Graham, S., & Harris, K. R. (2018) Self-Regulated Strategy Development: Theoretical Bases, Critical Instructional Elements, and Future Research. In Fidalgo Redondo, R., Harris, K., & Braaksma, M. (Eds.), *Design Principles for Teaching Effective Writing*. Leiden, The Netherlands: Brill.
- Graham, S., MacArthur, C. A., & Hebert, M. (2018) *Best practices in writing instruction*. Third edition. New York: The Guilford Press.
- Graham, S. & Perin, D., (2007a) A Meta-Analysis of Writing Instruction for Adolescent Students. *Journal of Educational Psychology*, 99 (3), 445-476.
- Graham, S. & Perin, D., (2007b) What We Know, What We Still Need to Know: Teaching Adolescents to Write, *Scientific Studies of Reading*, 11 (4), 313-335.
- Graham, S. & Perin, D. (2007c) *Writing next: Effective strategies to improve writing of adolescents in middle and high schools - A report to Carnegie Corporation of New York*. Washington, DC: Alliance for Excellent Education.
- Graham, S. & Sandmel, K. (2011) The Process Writing Approach: A Meta-analysis. *The Journal of Educational Research*, 104 (6), 396-407.
- Hales, P. (2014) Book Review: Graham, S., MacArthur, C. A., & Fitzgerald, J. (Eds.). (2013). *Best Practices in Writing Instruction* (2nd ed.). *Journal of Writing Research*, 6 (2), 195-198.
- Harris, K. (1985) Conceptual, methodological, and clinical issues in cognitive-behavioral assessment. *Journal of Abnormal Child Psychology*, 13 (3), 373-390.

- Harris, K., & Graham, S. (1992) Self-regulated strategy development: A part of the writing process. In M. Pressley, K. R. Harris, & J. T. Guthrie (Eds.), *Promoting academic competence and literacy in school* (277-309). San Diego, CA, US: Academic Press.
- Harris, K., & Graham, S. (2016) Self-Regulated Strategy Development in Writing: Policy Implications of an Evidence-Based Practice. *Policy Insights from the Behavioral and Brain Sciences*, 3 (1), 77-84.
- Harris, K., Graham, S., & Mason, L. (2002) POW plus TREE Equals Powerful Opinion Essays. *Teaching Exceptional Children*, 34 (5), 74-77.
- Harten, M. (2009) Book Review: *Best Practices in Writing Instruction*. *Journal of Education*, 189 (1-2), 206-208.
- Hayes, J. R. (1996) A new framework for understanding cognition and affect in writing. In C. M. Levy & S. Ransdell (Eds.), *The science of writing: Theories, methods, individual differences, and applications* (1-27). Hillsdale, NJ, US: Lawrence Erlbaum Associates, Inc.
- Hayes, J. R., & Flower, L. (1980) Identifying the Organization of Writing Processes. In L. W. Gregg, & E. R. Steinberg (Eds.), *Cognitive Processes in Writing: An Interdisciplinary Approach* (3-30). Hillsdale, NJ: Lawrence Erlbaum.
- Hemmerechts, K., & Kavadias, D. (2017) *Schoolcapaciteit in Brussel. Visies van stakeholders uit het Nederlandstalig Brussels onderwijs*. Brussel: Vrije Universiteit Brussel.
- Housen, A., & Kuiken, F. (2009) Complexity, accuracy and fluency in second language acquisition. *Applied Linguistics*, 30 (4), 461-473.
- Hout, R. & Vermeer, A. (2007) Comparing measures of lexical richness. In H. Daller, J. Milton & J. Treffers-Daller (Eds.), *Modelling and assessing vocabulary knowledge* (93-116). Cambridge: Cambridge University Press.
- Hunt, K. (1970) Recent measures in syntactic development. In Lester, M. (Ed.), *Readings in applied and transformational grammar*. New York: Holt, Rinehart and Winston.
- Hwang, M., & Lee, H.-K. (2017) Development and validation of the English writing strategy inventory. *System*, 68, 60-71.
- Hyland, K. (2016) Methods and methodologies in second language writing research. *System*, 59, 116-125.
- IDEWE (2014) *Risicoanalyse Psychosociale Aspecten*. IDEWE Confidential report on well-being at [name school].
- Janssens, R. (2013) *BRIO-taalbarometer(s): taalkennis en taalgebruik in Brussel*. BRIOFICHE. Brussels: BRIO.
- Janssens, R., Carlier, D., & Van de Craen, P. (2009) Education in Brussels. [Online] *Brussels Studies*, <http://journals.openedition.org/brussels/923> [Accessed 19 April 2020].
- Johnson, M. (2009) Book review: *S. Graham, C. A. MacArthur, and J. Fitzgerald (eds.): Best practice in writing instruction*. *Reading and Writing*, 22 (3), 373-374.
- Juzwik, M., Curcic, S., Wolbers, K., Moxley, K., Dimling, L., & Shankland, R. (2006) Writing Into the 21st Century: An Overview of Research on Writing, 1999 to 2004. *Written Communication*, 23 (4), 451-476.
- Kemmis, S. & McTaggart, R. (1981) *The Action Research Planner*. Victoria: Deakin University Press.
- Koizumi, R., & In'Nami, Y. (2012) Effects of text length on lexical diversity measures: Using short texts with less than 200 tokens. *System*, 40 (4), 554-564.
- Kurth, R. (1987) Using Word Processing to Enhance Revision Strategies During Student Writing Activities. *Educational Technology*, 27 (1), 13-19.

- La Guardia, J. G., & Ryan, R. M. (2002) What adolescents need: A self-determination theory perspective on development within families, school and society. In Pajares, F. & Urdan, T. (Eds.), *Academic motivation of adolescents*. Greenwich CT: IAP.
- Lavrakas, P. (2008) *Encyclopedia of survey research methods*. Thousand Oaks, CA: Sage Publications, Inc.
- Leijten, M., & Van Waes, L. (2013) Keystroke Logging in Writing Research. *Written Communication*, 30, 358-392.
- Lu, X. (2011) A corpus-based evaluation of syntactic complexity measures as indices of college-level ESL writers' language development. *TESOL Quarterly*, 45(1), 36-62.
- Lu, X., & Ai, H. (2015) Syntactic complexity in college-level English writing: Differences among writers with diverse L1 backgrounds. *Journal of Second Language Writing*, 29, 16-27.
- Macaro, E. (2006) Strategies for Language Learning and for Language Use: Revising the Theoretical Framework. *Modern Language Journal*, 90 (3), 320-337.
- MacArthur, C. A. (2016) Instruction in evaluation and revision. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (Vol. 2, 272-287). New York, NY: The Guilford Press.
- MacArthur, C. & Graham, S. (2016) Writing Research from a Cognitive Perspective. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (Vol. 2, 11-25). New York, NY: The Guilford Press.
- MacArthur, C. A., Graham, S., & Fitzgerald, J. (Eds.) (2016), *Handbook of writing research* (Vol. 2). New York, NY: The Guilford Press.
- MacArthur, C., Schwartz, S., & Graham, S. (1991) Effects of a reciprocal peer revision strategy in special education classrooms. *Learning Disability Research and Practice*, 6, 201-210.
- Manchón, R. M., de Larios, J. R., & Murphy, L. (2007) A review of writing strategies: Focus on conceptualizations and impact of the first language. In A. Cohen & E. Macaro (Eds.), *Language learner strategies: Thirty years of research and practice* (229-250). Oxford, UK: Oxford University Press.
- Marian, V., Blumenfeld, H.K., & Kaushanskaya, M. (2007) The language experience and proficiency questionnaire (leap-q): assessing language profiles in bilinguals and multilinguals. *Journal of Speech, Language and Hearing Research*, 50, 940-967.
- Mason, L., Kubina, R., Valasa, L., & Cramer, A. (2010) Evaluating Effective Writing Instruction for Adolescent Students in an Emotional and Behavior Support Setting. *Behavioral Disorders*, 35 (2), 140-156.
- Mason, L., & Shriner, J. (2008) Self-Regulated Strategy Development Instruction for Writing an Opinion Essay: Effects for Six Students with Emotional/Behavior Disorders. *Reading and Writing: An Interdisciplinary Journal*, 21 (1-2), 71-93.
- McAteer, M. (2013) *Bera/sage Research Methods in Education: Action research in education*. London: SAGE Publications Ltd
- McCarthy, P., & Jarvis, S. (2010) MTL, vocd-D, and HD-D: A validation study of sophisticated approaches to lexical diversity assessment. *Behavior Research Methods*, 42 (2), 381-392.
- McCarthy, P., & Jarvis, S. (2013) From intrinsic to extrinsic issues of lexical diversity assessment: An ecological validation study. In Jarvis, S. & Daller, M. (Eds.), *Vocabulary knowledge: Human ratings and automated measures*. (45-78). Amsterdam, Netherlands: John Benjamins.
- McNamara, D. S., Crossley, S. A., & McCarthy, P. M. (2010) Linguistic features of writing quality. *Written Communication*, 27(1), 57-86.

- Meier, A., & Vogt, F. (2015) The potential of stimulated recall for investigating self-regulation processes in inquiry learning with primary school students. *Perspectives in Science*, 5 (C), 45-53.
- Mettewie, L. (2004) *Attitudes en motivatie van taalleerders in België*. Doctoral dissertation. <https://pure.fundp.ac.be/ws/files/20077635/57219.pdf>.
- Ministerie van de Vlaamse Gemeenschap (2009) *Onderwijsspiegel. Verslag over de toestand van het onderwijs* (schooljaar 2007-2008). Brussels: Ministerie van Onderwijs.
- Ministerie van de Vlaamse Gemeenschap (2012) *Onderwijsspiegel. Jaarlijks rapport van de onderwijsinspectie* (schooljaar 2010-2011). Brussels: Ministerie van Onderwijs.
- Ministerie van de Vlaamse Gemeenschap (2014) *Onderwijsspiegel. Jaarlijks rapport van de Onderwijsinspectie* (schooljaar 2012-2013). Brussels: Ministerie van Onderwijs.
- Ministerie van Onderwijs (2012) *Eindtermen Nederlands derde graad*. Brussels: Ministerie van Onderwijs.
- Nasseri, M. (2017) *A Corpus-based Analysis of Syntactic Complexity measures in the Academic Writing of EFL, ESL, and Native English Master's Students*. Presentation, Conference: the 9th International Corpus Linguistics Conference CL2017, At University of Birmingham.
- National Commission on Writing for America's Families, Schools, and Colleges (2004) *Writing: A ticket to work ... or a ticket out: A survey of business leaders*. New York, NY: The College Board.
- Nikou, S., & Economides, A. (2016) The impact of paper-based, computer-based and mobile-based self-assessment on students' science motivation and achievement. *Computers in Human Behavior*, 55, 1241-1248.
- OECD (2015) School education in the Flemish Community of Belgium In *OECD Reviews of School Resources: Flemish Community of Belgium 2015*, OECD Publishing, Paris,
- Onderwijsinspectie (2013) Verslag over de doorlichting van GO! Atheneum Etterbeek te ETTERBEEK <http://data-onderwijs.vlaanderen.be/onderwijsaanbod/adres.aspx?sn=41483>
- Onderwijskiezer (2020) *Studierichtingen SO op basis van het studiegebied: Algemeen secundair onderwijs*. [online] [https://www.onderwijskiezer.be/v2/secundair/sec\\_studiegebied\\_detail.php?detail=1](https://www.onderwijskiezer.be/v2/secundair/sec_studiegebied_detail.php?detail=1) [Accessed 11 April 2018].
- Ortega, L. (2003) Syntactic Complexity Measures and their Relationship to L2 Proficiency A Research Synthesis of College-level L2 Writing. *Applied Linguistics*, 24 (4), 492-518.
- Ortega, L. (2012) Interlanguage complexity: A construct in search of theoretical renewal. In: Kortmann, B. & Szmrecsanyi, B. (Eds.) *Linguistic complexity: Second language acquisition, indigenization, contact*. Berlin: De Gruyter, pp. 127-155.
- Pajares, F. (2003) Self-Efficacy Beliefs, Motivation, and Achievement in Writing: A Review of the Literature. *Reading & Writing Quarterly*, 19 (2), 139-158.
- Pajares, F. (2007) Empirical Properties of a Scale to Assess Writing Self-Efficacy in School Contexts, *Measurement and Evaluation in Counseling and Development*, 39 (4), 239-249.
- Pander Maat, H., Kraf, R., van den Bosch, A., Dekker, N., van Gompel, M., Kleijn, S., Sanders, T., & van der Sloot, K. (2014) T-Scan: A new tool for analyzing Dutch text. *Computational Linguistics in the Netherlands Journal*, 4, 53--74.
- Polio, C. (1997) Measures of Linguistic Accuracy in Second Language Writing Research. *Language Learning*, 47 (1), 101-143.
- Political Geography Now (2016) *Belgium Administrative Regions* [Image] <https://www.polgeonow.com/2016/12/what-is-wallonia-in-belgium.html> [Retrieved 23 March 2020].

- Pressley, M., Forrest-Pressley, D., Elliott-Faust, D., & Miller, G. (1985) Children's use of cognitive strategies, how to teach strategies, and what to do if they can't be taught. In M. Pressley & C. J. Brainerd (Eds.), *Cognitive learning and memory in children* (1–47). New York: Springer-Verlag.
- Pressley, M., & Harris, K. R. (2009) Cognitive Strategies Instruction: From Basic Research to Classroom Instruction. *Journal of Education*, 189 (1–2), 77–94.
- Putnam, A. (2015) Mnemonics in education: Current research and applications. *Translational Issues in Psychological Science*, 1 (2), 130–139.
- Rathvon, N. (1999). *Effective School Interventions : Strategies for Enhancing Academic Achievement and Social Competence*. New York/London : Guilford Press.
- Rogers, L. & Graham, S. (2008) A Meta-Analysis of Single Subject Design Writing Intervention Research. *Journal of Educational Psychology*, 100 (4), 879–906.
- Rosenthal, I. (2007) Best practices in writing instruction. *Choice*, 45 (4), 679.
- Sacco, M., Smits, W., Spruyt, B., Kavadias, D., & d'Andrimont, C. (2016) Brussels youth: between diversity and lack of security [online] *Brussels Studies*, <http://journals.openedition.org/brussels/1345>. [Accessed 19 April 2019].
- Santangelo, T., Harris, K., & Graham, S. (2007) Self-regulated strategy development: A validated model to support students who struggle with writing. *Learning Disabilities: A Contemporary Journal*, 5 (1), 1–20.
- Santangelo T., Harris K., Graham S. (2016) Self-regulation and writing: Meta-analysis of the self-regulation processes in Zimmerman and Risemberg's model. In: MacArthur CA, Graham S, Fitzgerald J (Eds.) *Handbook of Writing Research*. 2nd edn. New York and London: Guilford Press, 174–193.
- Scarcella, R. (2002) Some key factors affecting the English learners' development of advanced literacy. In Schleppegrell, M., & Colombi, C. (Eds.) *Developing advanced literacy in first and second languages* [electronic resource] : Meaning with power (Ebook central). Mahwah, N.J.: Lawrence Erlbaum Associates.
- Scruggs, T. E., & Mastropieri, M. A. (2000) The effectiveness of mnemonic instruction for students with learning and behavior problems: An update and research synthesis. *Journal of Behavioral Education*, 10 (2–3), 163–173.
- Shell, D., Colvin Murphy, C., & Bruning, R. (1989) Self-Efficacy and Outcome Expectancy Mechanisms in Reading and Writing Achievement. *Journal of Educational Psychology*, 81 (1), 91–100.
- Sherman, C. K., & De La Paz, S. (2015) FIX: A Strategic Approach to Writing and Revision for Students With Learning Disabilities. *TEACHING Exceptional Children*, 48 (2), 93–101.
- Shora, N., & Hott, B. (2016) Write On: Improving Persuasive Writing Using the POW TREE Strategy. *Beyond Behavior*, 25 (2), 14–20.
- Silva, T. (1993) Toward an Understanding of the Distinct Nature of L2 Writing: The ESL Research and Its Implications. *TESOL Quarterly*, 27 (4), 657–677.
- Statbel (2020) *Brussel*. [online] <https://statbel.fgov.be/nl/gemeente/brussel#dashboard1> [Accessed 19 April 2019].
- Strid, J. E. (2016) The Linguistic Complexity of the English Learners' Writing. *US-China Education Review A*, 6, 3, 151–163.
- Strobl, C., Ailhaud, E., Benetos, K., Devitt, A., Kruse, O., Proske, A., & Rapp, C. (2019) Digital support for academic writing: A review of technologies and pedagogies. *Computers & Education*, 131, 33–48.
- Teacher ToolBox SRSD Strategies (n.d.) *POW + TREE* [online] <https://srsdstrategies.weebly.com/pow--tree.html> [Accessed 13 May 2019].

- Tedick, D. (1990) ESL writing assessment: Subject-matter knowledge and its impact on performance. *English for Specific Purposes*, 9 (2), 123-143.
- Teng, L., Sun, P., & Xu, L. (2018) Conceptualizing Writing Self-Efficacy in English as a Foreign Language Contexts: Scale Validation Through Structural Equation Modeling. *TESOL Quarterly*, 52 (4), 911-942.
- Thomas, N., & Rose, H. (2018) Do Language Learning Strategies Need to Be Self-Directed? Disentangling Strategies From Self-Regulated Learning. *TESOL Quarterly*, 53 (1), 248-257.
- Treffers-Daller, J. (2013). Measuring lexical diversity among L2 learners of French: an exploration of the validity of D, MTLD and HD-D as measures of language ability. In Jarvis, S. & Daller, M. (Eds.), *Vocabulary knowledge: human rating and automated measures*. (79-104). Amsterdam, Netherlands: Benjamins.
- Van Der Walt, J., & Hattingh, K. (2007) Fluency and accuracy levels in writing of Grade 12 ESL learners. *Per Linguam : A Journal of Language Learning*, 23 (2), 15-28.
- Vandeweghe, R. (2008) Research Matters: Writing Next and the Power to Teach (Book Review). *The English Journal*, 97 (5), 88-92.
- Van Waes, L., & Leijten, M. (2015) Fluency in Writing: A Multidimensional Perspective on Writing Fluency Applied to L1 and L2. *Computers and Composition*, 38, 79-95.
- Van Waes, L., Leijten, M., Wengelin, Å. & Lindgren, E. (2012) Logging Tools to Study Digital Writing Processes. In Berninger, V. (2012) (Ed.) *Past, present, and future contributions of cognitive writing research to cognitive psychology* (Ebook central). New York: Psychology Press.
- Van Weerdenburg, M., Tesselhof, M., & Van Der Meijden, H. (2019) Touch-Typing for Better Spelling and Narrative-Writing Skills on the Computer. *Journal of Computer Assisted Learning*, 35 (1), 143-152.
- Van Wijk, C. & Kempen, G. (1982) Syntactische formuleervaardigheid en het schrijven van opstellen. *Pedagogische Studien*, 59, 126-136.
- Vaughn, S., Schumm, J. & Sinagub, J. (1996) *Focus group interviews in education and psychology*. Thousand Oaks, CA: SAGE Publications, Inc.
- Verheijen, L. (2016) Linguistic Characteristics of Dutch Computer-Mediated Communication: CMC and School Writing Compared. In *Proceedings of the 4th Conference on CMC and Social Media Corpora for the Humanities*. Ljubljana, Slovenia.
- VGC (2018) *De evolutie van het Nederlandstalig Onderwijs in Brussel in cijfers*. Brussel: VGC.
- Werkgroep Schrijfvaardigheid. (2015) *Schrijfonderwijs in de schijnwerpers - Naar een betere schrijfvaardigheid van Nederlandse en Vlaamse leerlingen*. Nederlandse Taalunie. Retrieved from <https://taalunie.org/feeds/download/schrijfonderwijs-in-de-schijnwerpers-adviestekst-5dccc.pdf/Schrijfonderwijs%20in%20de%20schijnwerpers/original>
- Wolfe-Quintero, K., Inagaki, S., & Hae-Young, K. (1998) *Second language development in writing: measures of fluency, accuracy, & complexity*. Honolulu: Hawai's press.
- Worthen, J. B., & Hunt, R. R. (2011) *Mnemonology: Mnemonics for the 21st century*. New York: Psychology Press.
- Wyers, J. (2014) *Schrijfvaardigheid ondersteunen. Een effectstudie naar de inzet van een elektronische schrijfhulp in het secundair onderwijs*. (MA Linguistics). KU Leuven.
- Yang, Hu, & Zhang (2014) Reactivity of concurrent verbal reporting in second language writing. *Journal of Second Language Writing*, 24 (1), 51-70.
- Yates, F. A. (1966) *The Art of Memory*. Chicago: University of Chicago Press

- Zimmerman, B. J. (1989). A Social Cognitive View of Self-Regulated Academic Learning. *Journal of Educational Psychology*, 81 (3), 329-39.
- Zimmerman, B. J. (2002) Achieving Self-Regulation: The Trial and Triumph of Adolescence In Pajares, F. & Urdan, T. (Eds.) *Academic motivation of adolescents*. Greenwich CT: IAP.
- Zimmerman, B. J., & Bandura, A. (1994) Impact of Self-Regulatory Influences on Writing Course Attainment. *American Educational Research Journal*, 31 (4), 845-62.
- Zimmerman, B. J., & Risemberg, R. (1997) Becoming a Self-Regulated Writer: A Social Cognitive Perspective. *Contemporary Educational Psychology*, 22 (1), 73-101.
- Zimmerman, B. J., & Schunk, D. (1989) *Self-regulated learning and academic achievement : Theory, research, and practice (Springer series in cognitive development)*. New York ; London: Springer-Verlag.

# APPENDIX

# APPENDIX A

## Literature selection

### Academic research

Possibly the most ambitious research endeavour on evidence-based practices (EBPs) in writing in the past two decades comes from Graham and his associates. In his seminal meta-analysis from 2007 with Dolores Perin, they calculate the effect size of 11 writing intervention types from 123 studies. The advantage of using meta-analysis as a methodological tool is that it can "reduce unstated subjectivity in aggregating findings from a range of separate and disparate primary research reports examining a similar concept or intervention" (Cohen & al. 2018). Accordingly, it is a robust tool to harmonize findings across studies and discern tendencies. Graham & Perin's strict scientific rigour is evident in their stringent criteria for inclusion (only studies were included which had a (quasi-) experimental design and made use of a writing quality measure with high inter-rater reliability), thorough review of all available sources (including all previous meta-analyses on EBPs in writing research in theirs) and the meticulous rationale they provide in their methodological discussion. The focus of their analysis is on writing intervention studies with adolescent learners in secondary school settings and hence exactly in accordance with mine.

To extend this study by broadening the evidence base, Rogers & Graham (2008), subsequently set up a meta-analysis of 88 single-subject design writing interventions, confirming the impact of 8 of the EBPs from the meta-analysis of (quasi-)experimental studies. It is a relevant addition to my theoretical background, as my study can also be qualified as single subject research and Rogers &

Graham's provides a useful description of its quality requirements (e.g. the importance of treatment fidelity and "rich descriptions" (2008: 880) of context, participants and testing procedures).

In a third and final part of this inquiry, Graham and Perin (2007c<sup>12</sup>) analyse five qualitative studies on the approach to teaching writing of exceptional teachers and schools. They identify 10 common themes, which are all in line with the recommendations from the two meta-analyses. In spite of their intuitive appeal, no claims regarding their effectiveness are made in the absence of any form of pre-/post-testing. Rather, Graham & Perin suggest they provide interesting variables to be integrated in experimental or single subject studies. It should be noted that, compared to the comprehensive scope that was taken in Graham & Perin 2007a and Rogers & Graham 2008, the number of studies examined for this study is modest, with Graham & Perin 2007c admitting the studies surfaced as "bycatch" in their search for their meta-analyses. This has led to criticism from practitioner-researchers like Coker & Lewis (2008: 242) that "[a] broader synthesis of qualitative studies certainly seems warranted, considering the small number included in this synthesis".

#### Professional literature

Graham & Perin's (2007b) meta-analysis is the basis for *Writing Next* (Graham & Perin 2007a); which is, together with *Reading Next* (Biancarosa & Snow 2006), part of an effort to improve the teaching of literacy through evidence-based practices. It takes the 11 implications for teaching from Graham & Perin (2007b), outlines them in an accessible way and provides examples. To ensure my didactic approach would be entirely up-to-date, I also consulted the most recent source of professional literature on teaching writing, Graham & al.'s *Best practices in writing instruction* (2018). Moreover, I surveyed the reception of earlier editions of this volume and of *Writing Next*. This was done to ascertain that by tapping into work that is predominantly authored by a limited number of affiliated

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<sup>12</sup> the chronology in publication does not reflect the order the research was carried out in

researchers, I would not limit my understanding or miss any bias. This showed that the overall merit of *Writing Next* and *Best Practices in Writing Instruction* goes uncontested (Johnson 2009, Hales 2014, Harten 2009, Rosenthal 2007, Vandeweghe 2008), the works being widely accepted as an "essential resource" (Rosenthal 2007: 679) "that has the power to improve the knowledge base of teachers" (Harten 2009: 208). Criticism includes the fact that, in spite of the warning in *Writing Next* that it does not constitute an entire curriculum, little guidance is given as to how to efficiently combine treatments to arrive at one (Vandeweghe 2008) and the lack of attention to the needs of specialized populations in *Best Practices in Writing Instruction* (Harten 2009).

#### Policy guidelines

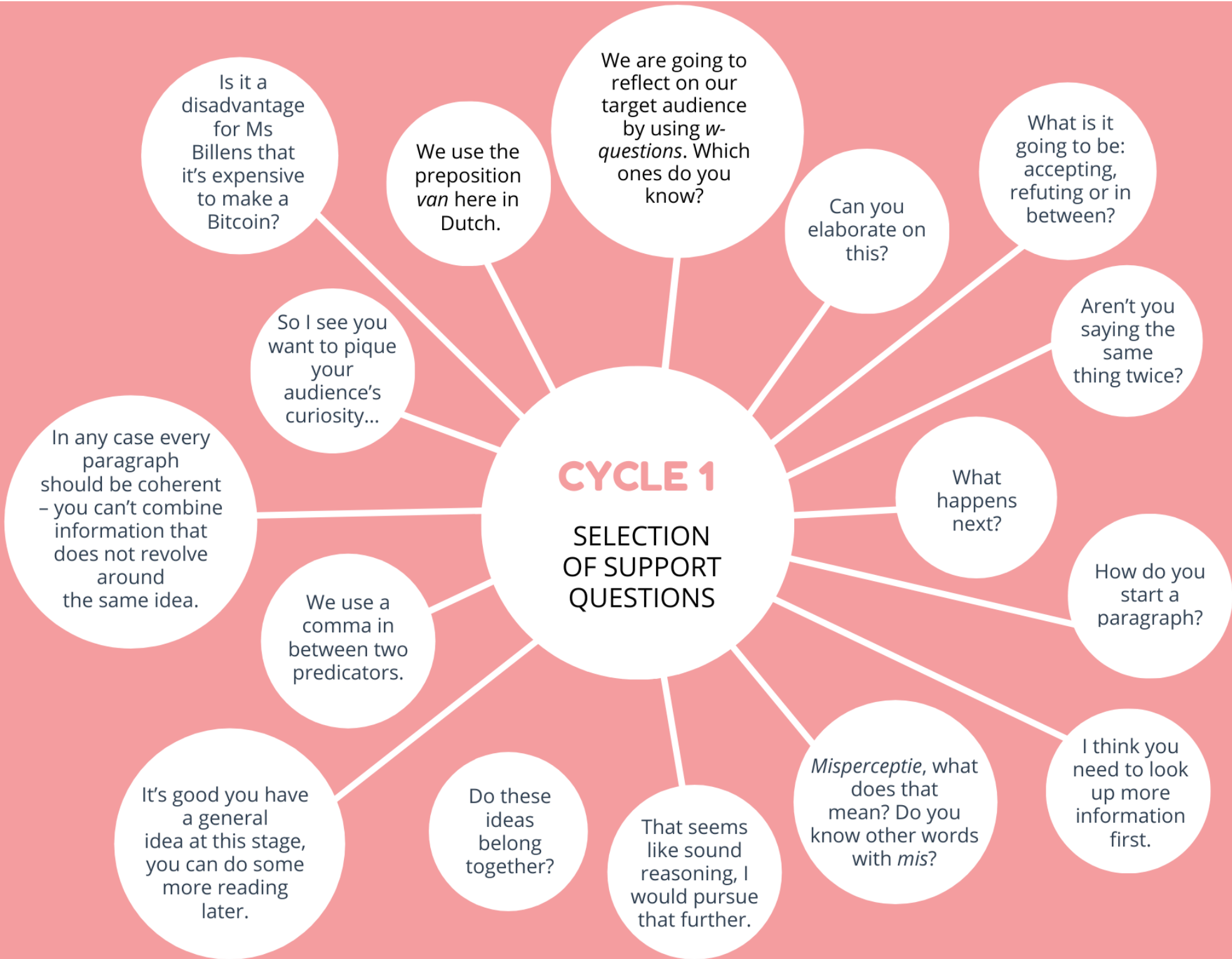
Teachers in Flanders enjoy a great degree of freedom (Boone & Van Houtte 2013). There is no form of standardized testing to be worked towards and the attainment goals set by the Ministry of Education (Ministerie van Onderwijs 2012) are formulated in a very broad way. Guidance is provided by the umbrella organisation the school belongs to, which translates them into concrete didactic suggestions, the *leerplan*<sup>13</sup> (GO! Onderwijs van de Vlaamse Gemeenschap 2014). The extent to which teachers are expected to follow these depends on management; when inspected schools are only judged on the extent to which they adhere to the attainment goals.

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<sup>13</sup> *learning plan*, i.e. syllabus

# APPENDIX B

The selection of quotes from the didactic pilot on the next page reflects the iterative nature of the writing process, with support given as and when it was required. It shows instances of language support, scaffolding of the writing process, stimulating audience-awareness and feedback on content and structure. Where possible I would think aloud to model or use open questions to stimulate reflection.



# APPENDIX C

Oreo slideshow



## Schrijfvaardigheidsremediëring Cyclus 2 – sessie 1

Koninklijk Atheneum Etterbeek



The images on this slide serve as metaphors for two types of writing and the result you end up with. The difference is that the example of urban planning/housing on the left involves vision, planning, strategy, resources and checking whereas the one the right, a favela, doesn't.



We will discern three levels in the writing process: the writing process in general, the writing of a text and the drafting of a paragraph.



These levels are not linear but recursive. We start off with the writing process, but the arrows indicate that you have to go back and forth while writing a text.




Analyse the assignment.



The first O in Oreo stands for Opdracht analyseren, analysing the assignment. You do this by taking into account the requirements (length, form, presentation), the assessment, the target audience and goal of the text.

Mevrouw Billens heeft je hulp nodig!

Mevrouw Billens wil een huis bouwen, maar huizen bouwen kost veel geld. Daarom heeft ze een idee: ze gaat geld beleggen in Bitcoins, zo kan ze haar kapitaal snel groter maken.

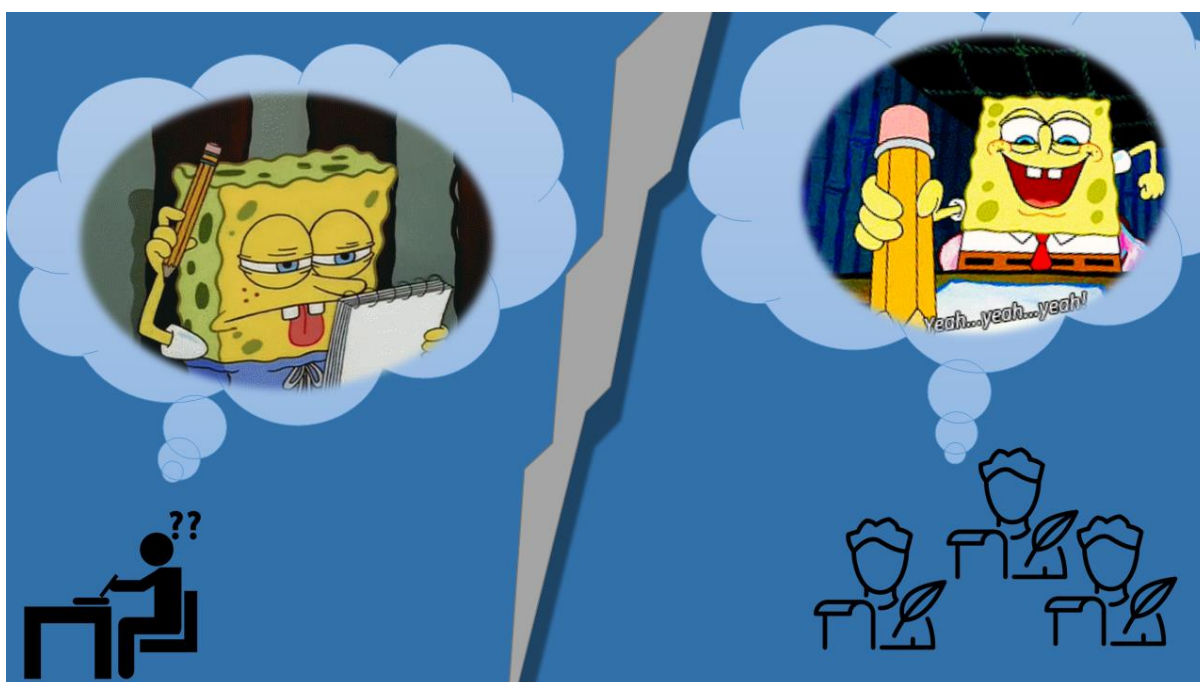


Vind jij het een goed idee dat mevrouw Billens geld in Bitcoins belegt om zo haar droomhuis te kunnen bouwen? Schrijf haar een Smartschoolbericht waarin je haar advies geeft. Leg uit in twee alinea's van telkens ongeveer 150 woorden waarom het (g)een goed idee is om in Bitcoins te investeren. Onderbouw je advies aan de hand van de informatie in de teksten, je eigen ideeën en je eigen voorkennis. Mevrouw Billens houdt niet van plagiaat: het is belangrijk dat je je advies volledig zelf schrijft en alles wat je overneemt uit een tekst (zowel ideeën als stukken tekst) van een bronvermelding voorziet.

Let's apply this to your assignment and tell me how the questions from the previous slide apply to it.



Stay calm and use strategies.



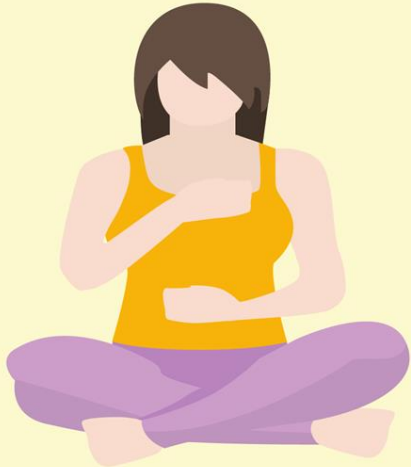
Much of the anxiety you may feel when writing can arise from the loneliness that comes with it. It is usually an activity that you carry out alone. It may feel like you are struggling and your peers find it much easier.



This is not true, however. Writing is a challenge for everyone. In Dutch there is a saying “Writing is 99% transpiration and 1% inspiration.” Moreover, Bereiter & Scardamalia who are expert writers to the point they are some of the most influential writing scholars consider writing to be similar to wrestling with the complexity of your own ideas and your own limitations. If they feel that way, why would you be any different. Know that it is normal to find it hard to write, it connects you with our common humanity.

## BREATHE IN, BELLY OUT

- Place one hand on your chest and the other on your belly.
- Inhale deeply through your nose for a count of four, making sure your belly abdomen is expanding and not your chest. Exhale for a count of four.
- Continue this breathing cycle for a few minutes.
- Feel the stress leave your body while your mind becomes calm.



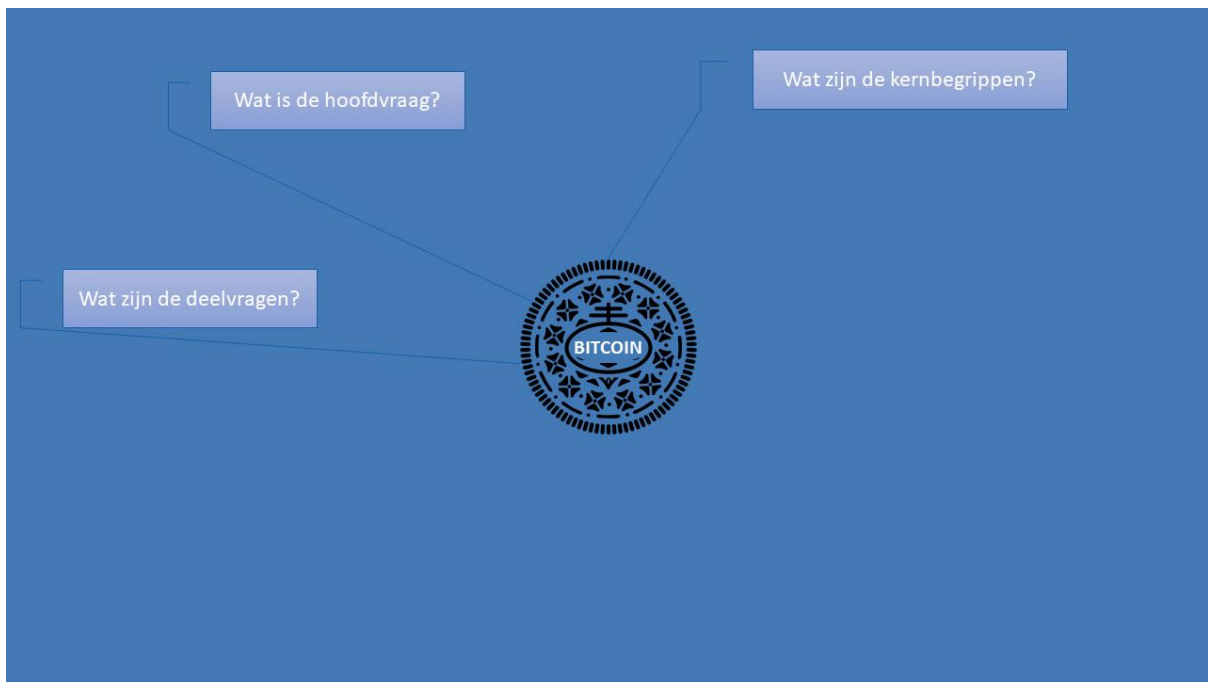
You can do a breathing exercise when you feel anxious, like this one. Let's give it a try.



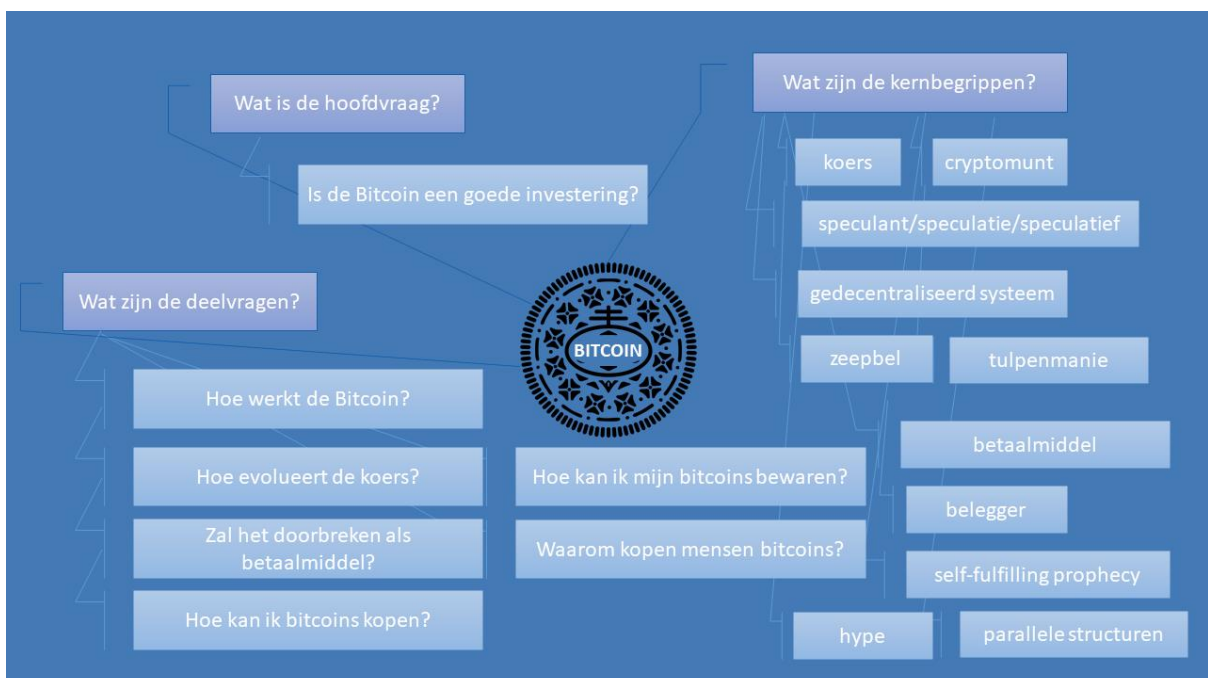
People who are good at focusing might not necessarily be more disciplined but might just have better ways of coping with distractions. Are you often distracted by social media, “weapons of mass distraction”? Try using a programme like Cold Turkey to block them while you work.



Explore the topic.



To explore the subject you are writing about, this mindmap can be of use. The questions guide you to analyse your topic (What is the critical question? What are the supporting questions? What are the major concepts?).



Let's see how we can put this into practice by using it to explore the topic of the bitcoin.



Start over if necessary.

Bear in mind that writing is not linear: you will have to start anew several times when writing a text.



You might have to go back to exploring your topic when you decide to include an extra paragraph while writing. Or formulating your ideas might make you feel anxious, so you come back to what you know about writing in general. One stage can lead to the other and vice versa.



And bear in mind: there are as many ways to be a good writer as there are ways to eat your Oreo!





# Schrijfvaardigheidsremediëring Cyclus 2 – sessie 2

Koninklijk Atheneum Etterbeek



## Zoek de verschillen

- Visie
- Planning
- Strategie
- Hulpmiddelen
- Controle

Repetition of the favela metaphor to highlight the importance of planning, etc.

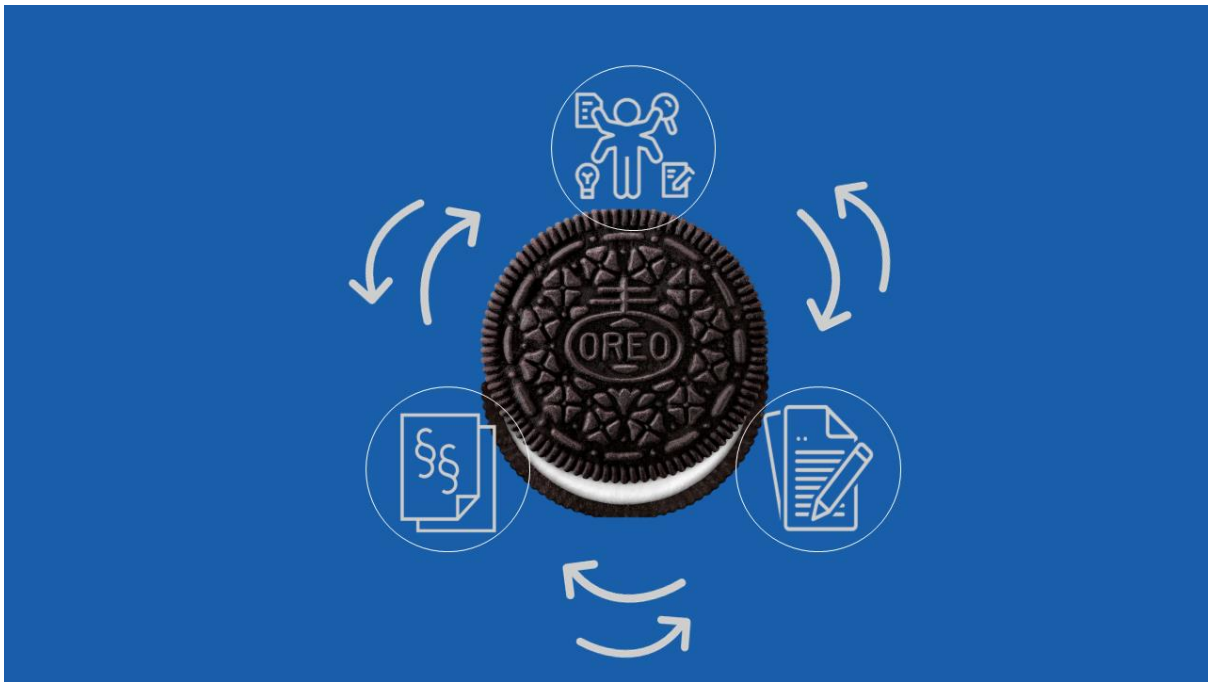


- O PDRACHT ANALYSEREN
- R USTIG CONCENTREREN & STRATEGIEËN GEBRUIKEN
- E XPLOREER HET ONDERWERP
- O PNIEUW BEGINNEN WANNEER NODIG

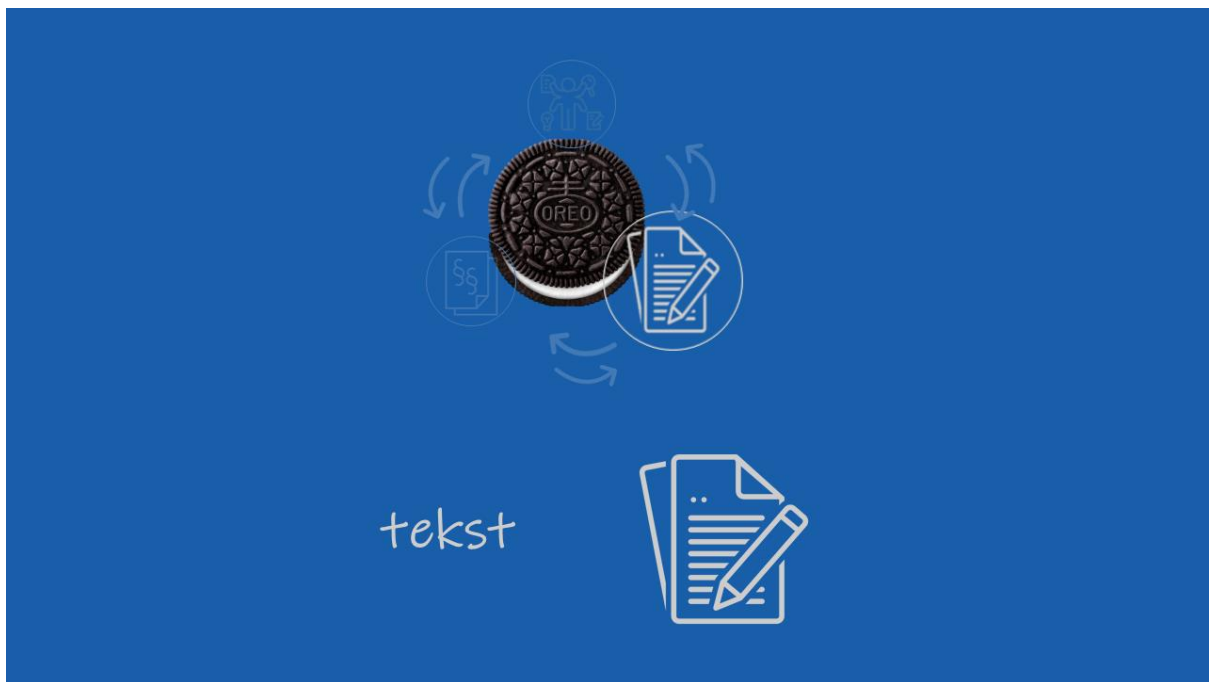
Repetition of last week's stages.



Repetition of the dimensions of text writing.



Repetition of writing as a recursive process.



This session focuses on the writing of the actual text as a whole, bearing in mind the iterative nature of writing.



Think about your structure.



How many of you could make this painting?



It gets a lot easier if you know that this painting was made using painting by numbers. Writing is similar: the more knowledge of writing and how to structure your text you bring to the table, the easier it is to write.



You can use the rule of three as a rule of thumb when contemplating the outline of your text.



Every text should consist of three parts (just like an Oreo biscuit), and for every part there are three things you should think of. For the introduction, you have to make sure you have a good opener to catch your audience's attention. It should contain the main idea of your text and a roadmap for what is to come. The middle, then, typically consists of three paragraphs in a standard argumentative text. This is no strict rule, but it can help you to structure your thoughts. Pay attention to the order of your arguments: which ones comes first, the strongest, weakest or the one in between? Finally, make sure

you use signposting expressions through guide your reader through your text. Thirdly, a conclusion should consist of a summary of what you have said in the body of your text, should consist of more than one sentence and can never contain new information.



Every paragraph should only contain one main idea.



Revise thoroughly at the end.



# Schrijfvaardigheidsremediëring Cyclus 2 – sessie 3

Koninklijk Atheneum Etterbeek



Repetition of the favela metaphor to highlight the importance of planning, etc.



Repetition of last week's stages.



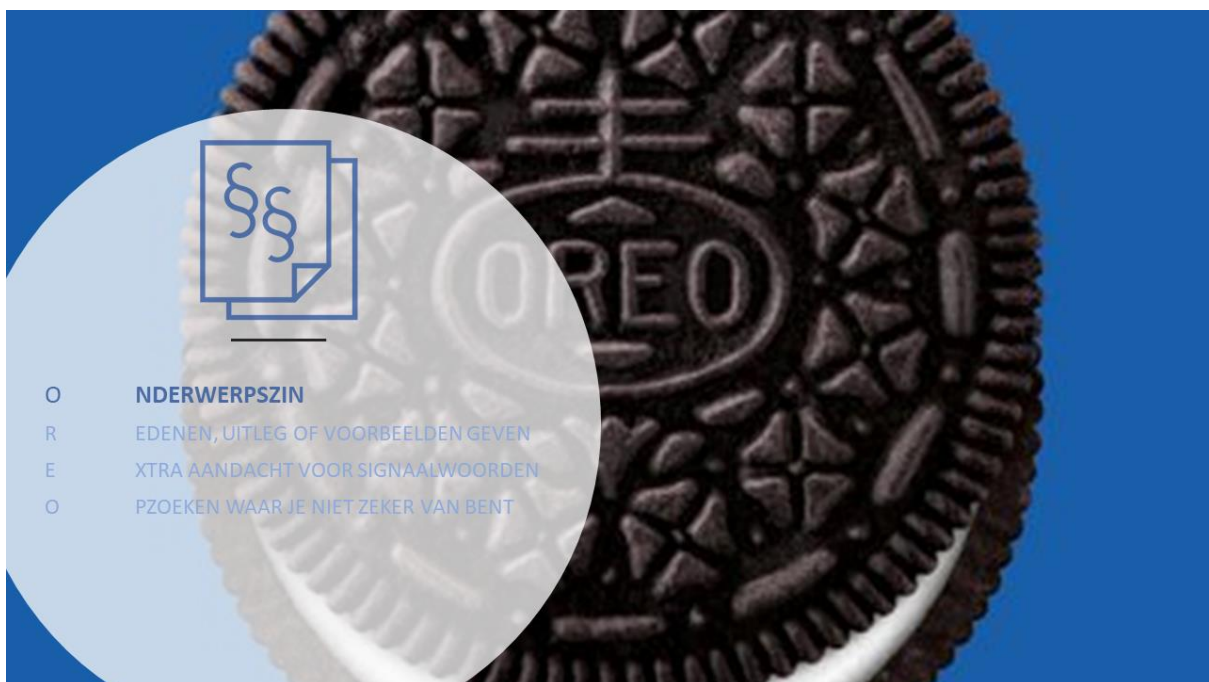
Repetition of the dimensions of text writing.



Repetition of writing as a recursive process.



This class will focus on the paragraph.



The main idea of your paragraph will usually be summarized in the first sentence. This sentence, a topic sentence, deserves extra attention.



After the topic sentence you go on by giving reasons, an explanation or examples.



Also within the paragraph it is important to use signposting expressions to make sure it is cohesive.

## signaalwoorden

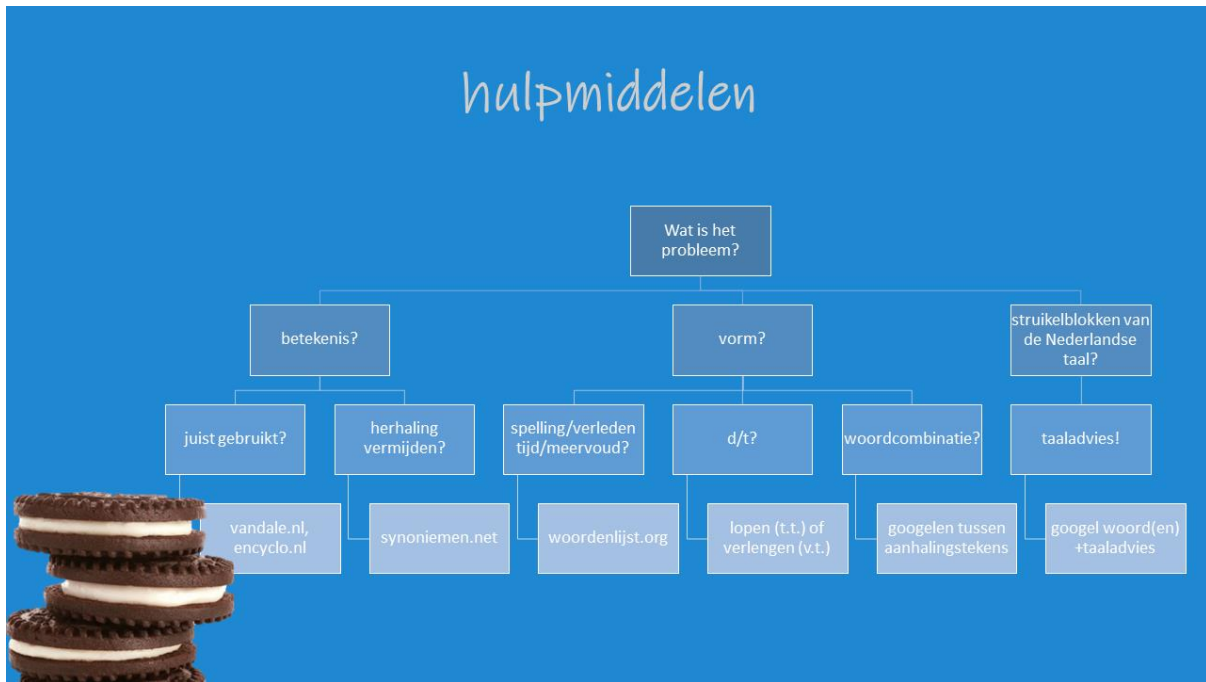
tijd	• voordat, nadat, eerst, daarna, wanneer, vroeger, later
opsomming	• en, ook, ten eerste, ten tweede, vervolgens, ten slotte
tegenstelling	• maar, echter, hoewel, toch, daarentegen, staat tegenover
vergelijking	• zoals, zo, evenals, in vergelijking met, soortgelijk(e)
oorzaak - gevolg	• door, doordat, waardoor, te danken aan, zodoende
doel - middel	• om te, daarmee, waarmee, opdat, door middel van
voorbeeld/toelichting	• bijvoorbeeld, een voorbeeld ( hier)van, zo, zoals, ter illustratie
samenvatting/conclusie	• samengevat, kortom, dus, al met al, vandaar dat, hieruit volgt
reden/verklaring/argument	• want, omdat, daarom, vanwege, immers, namelijk voorwaarde als, wanneer, mits, tenzij, in (voor) het geval dat

This is an overview of some words that can be used for this. Are there any in there you do not use yet? What do you think they mean? Can you come up with a sentence?

§§

- O NDERWERPSZIN
- R EDENEN, UITLEG OF VOORBEELDEN GEVEN
- E XTRA AANDACHT VOOR STRUCTUURWOORDEN
- O PZOEKEN WAAR JE NIET ZEKER VAN BENT

Look up if you are not sure.



These are some useful websites that you can use for this. Depending on what your problem is, you will consult a different website:

Meaning? (betekenis)

Proper use? (juist gebruik?)

Avoid repetition (herhaling vermijden?)

Form? (vorm?)

Spelling/past tense/plural? (spelling/verleden tijd/meervoud?)

d/t? -the typical pitfall in Dutch spelling, similar to English homophones like their/they're-

collocation? (woordcombinatie?)

Pitfalls of the Dutch language?

Language advice! (Taaladvies!)

# APPENDIX D

## Self-Regulated Strategy Development Stages of Instruction (Graham et al. 2014)

**Table 6.2. Self-Regulated Strategy Development Stages of Instruction**

Stages 1 and 2 are often combined in instruction; a stage or combination of stages may take several lessons to complete; Stages 3 and 5 typically take the most time in instruction; instruction is often recursive across stages, and students should progress across stages as they meet criteria for doing so.

### **1. Develop and Activate Knowledge Needed for Writing and Self-Regulation**

- Read and discuss works in the genre being addressed (persuasive essays, reports, etc.) to develop declarative, procedural, and conditional knowledge (e.g., “What is an opinion?” “What are the parts of a persuasive essay, and are they all here?” “How do you think the author came up with this idea, and what would you do?” “What might the author have done to organize the ideas?” “What might the author do when he/she gets frustrated?”); appreciation of characteristics of effective writing (e.g., “How did the writer grab your interest?”); and other knowledge and understandings targeted for instruction. Continue development through stage 3 as needed until all key knowledge and understandings are clear.
- Discuss and explore both writing and self-regulation strategies to be learned; typically, begin development of self-regulation, introducing goal setting and age-appropriate means of self-monitoring (e.g., rocket graphs for elementary students, bar graphs for older students).

### **2. Discuss It (Discourse is critical!)**

- Discuss students’ current writing and self-regulation abilities, their attitudes and beliefs about writing, what they are saying to themselves as they write, and how these factors might help or hinder them as writers; emphasize the roles of both effort and learning powerful strategies in becoming a better writer.
- Graphing the number of genre-specific essay elements and other targeted goals included in pretest or prior essays may be done; this will assist with goal setting (graphing prior writing can be skipped if students are likely to react negatively).
- Further discuss writing and self-regulation strategies to be learned: purposes, benefits, and how and when they can be used or might be inappropriate (begin generalization support).
- Introduce a graphic organizer for the writing genre and task being addressed.
- Analyze good, grade-appropriate model papers, taking notes from these papers on the graphic organizer to assist students in learning to make notes.
- Analyze poor essay models, take notes on a graphic organizer for a better essay, and write this essay collaboratively.
- Establish students’ commitment to learning strategies and acting as collaborative partners; establish the roles of student effort and strategy use in becoming an effective writer.

*(continued)*

**Table 6.2. Self-Regulated Strategy Development Stages of Instruction (Continued)**

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**3. Model It**

- Use interactive teacher modeling and/or collaborative modeling of writing and self-regulation strategies (including self-statements).
- Analyze and discuss strategies and the model's performance; make changes as needed.
- Students develop and record personal self-statements to assist them when writing.
- Model self-assessment and self-recording through graphing of modeled, collaboratively written compositions.
- Promote student development of self-regulation strategies across other tasks and situations; discuss use in other settings (generalization support).

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**4. Memorize It**

- Although begun in earlier stages, require and confirm memorization of strategies, the meaning and importance of each step in each strategy, any mnemonics, and self-instructions as appropriate.
- Continue to confirm and support memorization in following stages, making sure students have memorized the mnemonics, what they mean, and the importance of each step before stage 6.

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**5. Support It**

- Teachers and students use writing and self-regulation strategies collaboratively to achieve success in composing, using prompts such as strategy charts, personal self-statements sheets, word lists (e.g., linking words, "million dollar words"/effective vocabulary), and graphic organizers.
- Challenging initial goals for genre elements and characteristics of writing are established collaboratively with students and individualized as needed; criterion levels are increased gradually until final goals are met.
- Prompts, guidance, and collaboration are faded individually (e.g., graphic organizer replaced with student creating mnemonic on scratch paper) until the student can compose successfully alone.
- Self-regulation components (goal setting, self-instructions, self-monitoring, and self-reinforcement) are all being used by this stage; additional forms of self-regulation, such as managing the writing environment and using imagery, may be introduced.
- Discuss plans for maintenance; continue support of generalization.

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**6. Independent Performance**

- Students are able to use writing and self-regulation strategies independently; teachers monitor and support/enhance as needed.
- Fading of overt self-regulation may begin (e.g., graphing may be discontinued, self-statements sheets may not be out during writing).
- Plans for maintenance and generalization continue to be discussed and implemented.

# APPENDIX E

## General remarks concerning survey

The items on self-efficacy, strategies and attitudes were preceded by a section on *background details* and one on language. For the latter, the following information was obtained:

- *mother tongue*: using an answer suited to multilingual respondents adapted from Mettewie (2008)
- *proficiency in Dutch*: adapted from research on assessing language profiles in bilinguals by Marian & al. (2007)
- *self-reported writing performance*: in line with Bruning (2013), pupils were asked to self-assess their typical mark for a writing task, using the marking system (0-10) most common in Flanders

Dörnyei & Taguchi's (2010: 49) warn researchers that *translation* is often "insufficiently reflected". I thus had a language expert (Dutch native speaker with near-native proficiency in English) from the department of Linguistics at Ghent University check all translated items. The most important concern that was raised was that some of the terminology used was potentially unclear. It was suggested the term *schrijven*<sup>14</sup> is lexically ambiguous (it should be noted that this is not inherent to the translation but also the case for *writing*), because it can refer both to the entire writing process (including preparatory research, brainstorming and planning) or the mere act of writing. To make this clear, the teacher supervising the survey taking was asked to clearly explain writing referred to the former. Minor language changes were made to ensure the survey's accessibility to secondary pupils, as

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<sup>14</sup> schrijven

virtually all scales were designed for college students. The clarity of the items was further tested by getting feedback from two former -bilingual- pupils and one entire class group.

Avoiding *respondent fatigue*, i.e. "when survey participants become tired of the survey task" (Lavrakas 2008: 742), and gathering as much data as possible is a challenging balancing act. To avoid participants getting bored and the quality of their responses deteriorating, I took several measures: (a) no open questions were asked (Lavrakas 2008), (b) motivational pictures were added to the questionnaire, a practice which was perceived by the pupils in my second-year research on language attitudes to be a fun way to encourage them to go on, (c) care was taken that the survey would not take more than 15 minutes, which Brosnan & al. (2018) consider the cut-off point for a short survey. Finally, the surveys were administered electronically, to facilitate data collection and processing, but also because using computers or mobile devices can have a motivating effect on students filling out questionnaires (Nikou & Economides 2016).

Overall item	Subscale item	Item	Translation/original	Adapted from/based on	Answer options	Remarks
BACKGROUND INFORMATION						
1.	1.	In welke klas zit je?	What class are you in?		MC: 6 HUWE/6 ECMT3/other	
2.	2.	Hoe oud ben je?	How old are you?		MC: 16/17/18/19/20	
3.	3.	Ben je al een keer blijven zitten?	Have you had to resit a year?		MC: Ja, 1 x/Ja, 2 x/Ja, 3 x/Nee	
4.	4.	Wat is je geslacht?	What is your gender?		MC: girl/boy/other	
LANGUAGE						
5.	1.	Mijn moedertaal is/mijn moedertalen zijn:	My mother tongue is/my mother tongues are	Mettewie 2008	checkboxes: Nederlands/Frans/other	
6.	2.	Hoe schat jij je algemene Nederlandse taalvaardigheid in? Geef jezelf een cijfer op 10.	How would you rate your general Dutch language proficiency? Give yourself a mark out of 10.	Marian & al. 2007	linear scale 0 to 10	phrasing simplified to adapt to secondary school context

7.	3.	Hoe schat jij je Nederlandse spreekvaardigheid in? Geef jezelf een cijfer op 10.	How would you rate your Dutch speaking proficiency? Give yourself a mark out of 10.	Marian & al. 2007	linear scale 0 to 10	phrasing simplified to adapt to secondary school context
8.	4.	Hoe schat jij je Nederlandse luistervaardigheid in? Geef jezelf een cijfer op 10.	How would you rate your Dutch listening proficiency? Give yourself a mark out of 10.	Marian & al. 2007	linear scale 0 to 10	phrasing simplified to adapt to secondary school context
9.	5.	Hoe schat jij je Nederlandse schrijfvaardigheid in? Geef jezelf een cijfer op 10.	How would you rate your Dutch writing proficiency? Give yourself a mark out of 10.	Marian & al. 2007	linear scale 0 to 10	phrasing simplified to adapt to secondary school context
10.	6.	Hoe schat jij je Nederlandse leesvaardigheid in? Geef jezelf een cijfer op 10.	How would you rate your Dutch reading proficiency? Give yourself a mark out of 10.	Marian & al. 2007	linear scale 0 to 10	phrasing simplified to adapt to secondary school context

11.	7.	Hoeveel haal je gemiddeld op een schrijftaak? Geef jezelf een cijfer op 10.	How much do you score, on average, for a writing assignment? Give yourself a mark out of 10.	Bruning et al. 2013	linear scale 0 to 10	adapted to Flemish marking system
12.	8.	Hoeveel denk je in de toekomst te zullen halen op een schrijftaak? Geef jezelf een cijfer op 10.	How much do you think you will score in the future? Give yourself a mark out of 10.	Bruning et al. 2013	linear scale 0 to 10	adapted to Flemish marking system
INTERVENTION-SPECIFIC SELF EFFICACY						
13.	1.	Ik kan een onderwerp onderzoeken door erover te lezen en te schrijven.	I can research a topic by reading and writing about it.		0-100 self-efficacy scale	intervention-specific: writing-to-learn
14.	2.	Ik kan een computer gebruiken als instrument om een schrijftaak te maken.	I can use a computer as an instrument to make a writing assignment.		0-100 self-efficacy scale	intervention-specific: computer-assisted

15.	3.	Ik kan mijn ideeën voor een tekst duidelijk uitleggen aan een medeleerling.	I can explain my ideas for a text clearly to a fellow pupil.		0-100 scale	self-efficacy	intervention-specific: collaborative writing
16.	4.	Ik kan tijdens het schrijven switchen tussen verschillende fases in het schrijfproces. (fases zijn bijvoorbeeld: oriënteren, verwerken, uitvoeren, reflecteren)	I can switch between different phases during the writing process (phases are, for example, orientation, processing, execute, reflect).		0-100 scale	self-efficacy	intervention-specific: iterative approach
META-LEVEL							
SELF-EFFICACY							
17.	1.	Ik kan me minstens een uur op mijn schrijven concentreren.	I can focus on my writing for at least one hour.	Bruning et al. 2013	0-100 scale	self-efficacy	

18.	2.	Ik kan afleidingen vermijden als ik schrijf.	I can avoid distractions while I write.	Bruning et al. 2013	0-100 scale	self-efficacy	
19.	3.	Ik kan snel aan schrijfoopdrachten beginnen.	I can start writing assignments quickly./ I can start writing with no difficulty.	Bruning et al. 2013/Zimmerman & Bandura 1994	0-100 scale	self-efficacy	
20.	4.	Ik kan blijven schrijven, ook als het moeilijk is.	I can keep writing even when it's difficult.	Bruning et al. 2013	0-100 scale	self-efficacy	
21.	5.	Ik kan mijn schrijfdoelen bepalen voor ik schrijf.	I can think of my goals before writing./ I can think of my writing goals before I write.	Teng et al. 2018, Bruning et al. 2013	0-100 scale	self-efficacy	
22.	6.	Ik kan mijn sterktes en zwaktes bepalen bij het schrijven.	I can evaluate my strength and weakness in writing.	Teng et al. 2018	0-100 scale	self-efficacy	
23.	7.	Ik kan de instructies en strategieën uit de lessen	I can use the writing knowledge and strategies being taught in writing courses.	Teng et al. 2018	0-100 scale	self-efficacy	

		schrijfvaardigheid gebruiken.				
24.	8.	Ik kan een plan maken (in mijn hoofd) voor hoe ik het schrijven van een tekst ga aanpakken.	I can think of different ways to help me to plan before writing.	Teng et al. 2018	0-100 self-efficacy scale	
25.	9.	Ik kan veel ideeën bedenken voor ik begin te schrijven.	I can think of many ideas for my writing.	Bruning et al. 2013	0-100 self-efficacy scale	
26.	10.	Ik kan goede voorbeelden bedenken om een belangrijk punt te illustreren.	I can come up with memorable examples quickly to illustrate an important point.	Zimmerman & Bandura 1994	0-100 self-efficacy scale	
STRATEGIES						
27.	1.	Sta ik stil bij wat er zal geëvalueerd worden in mijn tekst.	I consider what will be assessed in my writing.	Hwang & Lee 2017	5-point Likert scale	

28.	2.	Sta ik stil bij wat de vereisten van de schrijftaak zijn.	I consider what the requirements of the writing task are.	Hwang & Lee 2017	5-point Likert scale	
29.	3.	Als ik brainstorm over ideeën, schrijf ik de ideeën die in me opkomen op in mijn moedertaal.	When generating ideas, I write down ideas that come to mind in Korean.	Hwang & Lee 2017	5-point Likert scale	Korean > my mother tongue
30.	4.	Als ik brainstorm over ideeën, schrijf ik de ideeën die in me opkomen op in het Nederlands.	When generating ideas, I write down ideas that come to mind in English.	Hwang & Lee 2017	5-point Likert scale	English > Dutch
31.	5.	Om ideeën te vinden, lees ik verschillende bronnen.	To generate ideas, I refer to a variety of reading materials.	Hwang & Lee 2017	5-point Likert scale	
32.	6.	Om duidelijk het doel van de tekst te begrijpen, denk ik na over mijn doelpubliek.	To clarify the purpose of the writing, I identify the expected readers.	Hwang & Lee 2017	5-point Likert scale	

33.	7.	Om bijkomende ideeën te vinden over een schrijftonderwerp, lees ik bijkomende bronnen.	To seek additional ideas on a writing topic, I refer to reading materials.	Hwang & Lee 2017	5-point Likert scale	
TEXT-LEVEL						
SELF-EFFICACY						
34.	1.	Ik kan een tekst schrijven met een logische opbouw.	I can write a composition with a clear organisation or structure.	Teng et al. 2018	0-100 self-efficacy scale	
35.	2.	Ik kan snel een goede openingszin vormen.	I can construct a good opening sentence quickly.	Zimmerman & Bandura	0-100 self-efficacy scale	
36.	3.	Ik kan bepalen of een tekst goed is of slecht.	I can evaluate whether a composition is good or bad.	Teng et al. 2018	0-100 self-efficacy scale	
37.	4.	Ik kan mijn tekst herschrijven om de structuur te verbeteren.	I can revise my composition to make it better organized.	Teng et al. 2018	0-100 self-efficacy scale	
STRATEGIES						

38.	1.	Ik maak een plan voor mijn tekst in het Nederlands.	I make an outline in English.	Hwang & Lee 2017	5-point Likert scale	English > Dutch
39.	2.	Ik maak een plan voor mijn tekst in mijn moedertaal.	I make an outline in Korean.	Hwang & Lee 2017	5-point Likert scale	Korean > my mother tongue
40.	3.	Ik lees alinea's meerdere keren om te controleren of ze logisch op elkaar volgen.	I read repeatedly through paragraphs to check the logical flow.	Hwang & Lee 2017	5-point Likert scale	
41.	4.	Ik lees mijn definitieve versie grondig van begin tot eind om fouten te zoeken.	I read the final draft thoroughly from beginning to end to look for any errors.	Hwang & Lee 2017	5-point Likert scale	
42.	5.	Beoordeel ik zelf of het onderwerp en de ideeën waarmee ik het onderbouw goed bij elkaar aansluiten.	I assess my writing by myself in terms of whether the topic and its supporting ideas are effectively connected.	Hwang & Lee 2017	5-point Likert scale	

43.	6.	Vraag ik iemand die het Nederlands beter beheerst om feedback.	I seek feedback from a native speaker.	Hwang & Lee 2017	5-point Likert scale	native speaker > someone with a higher proficiency
TRANSLATION LEVEL						
SELF-EFFICACY						
44.	1.	Ik kan verwarrende zinnen herschrijven.	I can revise wordy or confusing sentences of my writing.	Teng et al. 2018	0-100 self-efficacy scale	
45.	2.	Ik kan grammaticale fouten in mijn tekst verbeteren.	I can revise basic grammar errors in my writing.	Teng et al. 2018	0-100 self-efficacy scale	
46.	3.	Ik kan correct spellen als ik een tekst schrijf.	I can spell my words correctly./ Correctly spell all words in a one page story or composition	Bruning et al. 2013/Pajares 2007	0-100 self-efficacy scale	
47.	4.	Ik kan de juiste interpunctie (leestekens) gebruiken als ik een tekst schrijf.	I can punctuate my sentences correctly./ Correctly punctuate a one page story or composition.	Bruning et al. 2013/Pajares 2007	0-100 self-efficacy scale	
48.	5.	Ik kan grammaticaal correcte zinnen vormen.	I can write grammatically correct sentences.	Bruning et al. 2013	0-100 self-efficacy scale	

49.	6.	Ik kan verschillende woorden (synoniemen, verschillende formuleringen) bedenken om mijn ideeën te beschrijven.	I can think of many words to describe my ideas.	Bruning et al. 2013	0-100 self-efficacy scale	
50.	7.	Ik kan de zinnen van een alinea zo opbouwen dat mijn onderwerp helder wordt uitgewerkt.		Teng et al. 2018	0-100 self-efficacy scale	
51.	8.	Ik kan mijn ideeën omzetten in woorden.	I can put my ideas into writing.	Bruning et al. 2013	0-100 self-efficacy scale	
STRATEGIES						
52.	1.	Als ik het moeilijk vind om in het Nederlands te schrijven, schrijf ik eerst in	If I have trouble writing in English, I write what I want to express in Korean first and then translate it into English.	Hwang & Lee 2017	5-point Likert scale	English > Dutch, Korean > my mother tongue

		mijn moedertaal en vertaal dan naar het Nederlands.				
53.	2.	Ik vraag iemand die het Nederlands beter beheerst advies over Nederlandse uitdrukkingen die ik niet ken of wil gebruiken.	I ask a native speaker about English expressions that I do not know or that I want to use.	Hwang & Lee 2017	5-point Likert scale	native speaker > someone with a higher proficiency
54.	3.	Ik gebruik een Nederlandstalig woordenboek om mijn spelling te verbeteren.	I use an English dictionary to correct spellings.	Hwang & Lee 2017	5-point Likert scale	English > Dutch
55.	4.	Ik herlees mijn schrijftaak om typfouten te zoeken en te verbeteren.	I review my work to look for and correct typos.	Hwang & Lee 2017	5-point Likert scale	
56.	5.	Ik herlees mijn schrijftaak om grammaticale fouten te zoeken en te verbeteren.	I review my work to look for and correct grammatical errors.	Hwang & Lee 2017	5-point Likert scale	

57.	6.	Ik herlees de samenhang tussen zinnen meerdere keren om te controleren of er een logische flow is.	I reread the relationship between sentences repeatedly to check the logical flow.	Hwang & Lee 2017	5-point Likert scale	
GENERAL LANGUAGE LEARNING STRATEGIES						
58.	1.	Ik probeer nuttige Nederlandse uitdrukkingen te onthouden als ik Nederlandstalige boeken lees.	I try to memorize useful English expressions when reading English books.	Hwang & Lee 2017	5-point Likert scale	English > Dutch
59.	2.	Ik probeer nuttige Nederlandse uitdrukkingen te onthouden als ik naar Nederlandstalige series of films kijk.	I try to memorize useful English expressions when watching English soap operas or movies.	Hwang & Lee 2017	5-point Likert scale	English > Dutch
60.	3.	Ik probeer Nederlandse uitdrukkingen en vaste	I try to memorize formulaic English expressions.	Hwang & Lee 2017	5-point Likert scale	English > Dutch

		woordcombinaties te onthouden.				
61.	4.	Ik lees verscheidene Nederlandstalige boeken om nuttige Nederlandse uitdrukkingen te leren kennen.	I read numerous English books to become familiar with useful English expressions.	Hwang & Lee 2017	5-point Likert scale	English > Dutch
TASK-LEVEL SELF-EFFICACY						
62.	1.	Ik kan schema's en samenvattingen van gelezen en beluisterde informatie en studieteksten schrijven.	I can write schemes and summaries of written and spoken information and textbook texts.	Bandura 2006/Ministerie van Onderwijs 2012	0-100 self-efficacy scale	
63.	2.	Ik kan instructies schrijven.	I can write instructions.	Bandura 2006/Ministerie	0-100 self-efficacy scale	

				van Onderwijs 2012		
64.	3.	Ik kan uitnodigingen schrijven.	I can write invitations.	Bandura 2006/Ministerie van Onderwijs 2012	0-100 self-efficacy scale	
65.	4.	Ik kan verslagen schrijven.	I can write reports.	Bandura 2006/Ministerie van Onderwijs 2012	0-100 self-efficacy scale	
66.	5.	Ik kan sollicitatiebrieven schrijven.	I can write application letters.	Bandura 2006/Ministerie van Onderwijs 2012	0-100 self-efficacy scale	
67.	6.	Ik kan cv's schrijven.	I can write CVs.	Bandura 2006/Ministerie	0-100 self-efficacy scale	

				van Onderwijs 2012		
68.	7.	Ik kan zakelijke brieven schrijven.	I can write formal letters.	Bandura 2006/Ministerie van Onderwijs 2012	0-100 self-efficacy scale	
69.	8.	Ik kan gedocumenteerde en beargumenteerde teksten schrijven.	I can write well-documented and well-reasoned texts.	Bandura 2006/Ministerie van Onderwijs 2012	0-100 self-efficacy scale	
70.	9.	Ik kan een betoog schrijven.	I can write a persuasive text.	Bandura 2006/Ministerie van Onderwijs 2012	0-100 self-efficacy scale	
71.	10.	Ik kan een eindwerk Nederlands schrijven.	I can write an end-of-year project for Dutch.	Bandura 2006	0-100 self-efficacy scale	

72.	11.	Ik kan een onderbouwd advies schrijven.	I can write a documented piece of advice.	Bandura 2006	0-100 self-efficacy scale	
ATTITUDES						
INTRUMENTAL ORIENTATION						
73.	1.	Ik vind dat het Nederlands een nuttige taal is.	I think Dutch is a useful language.	Mettewie 2008	7-point Likert scale	
74.	2.	Nederlands kennen is voor mij belangrijk om aan de Nederlandstalige cultuur deel te nemen (theater, film, concerten, tentoonstellingen).	Knowing Dutch is important to me to participate in Dutch cultural life (theatre, films, concerts, exhibitions).	Mettewie 2008	7-point Likert scale	
75.	3.	Nederlands kennen is voor mij belangrijk, omdat ik dan gemakkelijker meer kennis kan opdoen.	Knowing Dutch is important to me because that way I can gather knowledge more easily that way.	Mettewie 2008	7-point Likert scale	

76.	4.	Nederlands kennen is voor mij belangrijk, omdat ik dan een betere job zal vinden.	Knowing Dutch is important to me because I will find a better job.	Mettewie 2008	7-point Likert scale	
INTEGRATIVE ORIENTATION						
77.	1.	Ik vind dat het Nederlands moeilijk te begrijpen is.	I think Dutch is hard to understand.	Mettewie 2008	7-point Likert scale	
78.	2.	Ik vind dat het Nederlands een lelijke taal is.	I think Dutch is an ugly language.	Mettewie 2008	7-point Likert scale	
79.	3.	Ik vind dat het Nederlands een ingewikkelde grammatica heeft.	I think Dutch has a complicated grammar.	Mettewie 2008	7-point Likert scale	
80.	4.	Ik vind dat het Nederlands een moderne, hippe taal is.	I think Dutch is a modern, hip language.	Mettewie 2008	7-point Likert scale	
81.	5.	Ik vind dat het Nederlands een rijke woordenschat heeft.	I think Dutch has a rich vocabulary.	Mettewie 2008	7-point Likert scale	
82.	6.	Ik vind dat Nederlands kennen moeilijk is.	I think knowing Dutch is hard.	Mettewie 2008	7-point Likert scale	

83.	7.	Ik vind dat het Nederlands een mooie taal is.	I think Dutch is a beautiful language.	Mettewie 2008	7-point Likert scale	
DUTCH CLASSES						
84.	1.	Ik vind de lessen Nederlands heel tof.	I think the Dutch classes are fun.	Mettewie 2008	7-point Likert scale	
85.	2.	In de Nederlandse les heb ik het liefst dat er alleen Nederlands gesproken wordt.	In the Dutch course I want there to be only Dutch spoken.	Mettewie 2008	7-point Likert scale	
86.	3.	Ik vind de lessen Nederlands helemaal niet interessant.	I don't think the Dutch classes are interesting at all.	Mettewie 2008	7-point Likert scale	
87.	4.	Ik vind het extra uur Nederlands heel tof.	I think the extra period of Dutch is fun.	Mettewie 2008	7-point Likert scale	adapted to probe into attitude towards remedial period
LIKING WRITING SCALE: GENERAL						
88.	1.	Ik vind schrijven leuk.	I enjoy writing	Bruning et al. 2013	5-point Likert scale	
89.	2.	Ik hou niet van schrijven.	I don't like to write	Bruning et al. 2013	5-point Likert scale	

90.	3.	Schrijven is tof.	writing is fun	Bruning et al. 2013	5-point Likert scale	
91.	4.	Ik voel me slecht als ik schrijf.	I feel bad when I write	Bruning et al. 2013	5-point Likert scale	
LIKING WRITING SCALE: DUTCH						
92.	1.	Ik vind schrijven in het Nederlands leuk.	I enjoy writing	Bruning et al. 2013	5-point Likert scale	
93.	2.	Ik hou niet van schrijven in het Nederlands.	I don't like to write	Bruning et al. 2013	5-point Likert scale	
94.	3.	Schrijven is tof in het Nederlands.	writing is fun	Bruning et al. 2013	5-point Likert scale	
95.	4.	Ik voel me slecht als ik schrijf in het Nederlands.	I feel bad when I write	Bruning et al. 2013	5-point Likert scale	

# APPENDIX F

## MTLD

Mccarthy, P., & Jarvis, S. (2010). MTLD, vocd-D, and HD-D: A validation study of sophisticated approaches to lexical diversity assessment. *Behavior Research Methods*, 42(2), 381–392.

## MTLD

### Processing MTLD

MTLD is an index of a text's LD, evaluated sequentially. It is calculated as the mean length of sequential word strings in a text that maintain a given TTR value (here, .720). During the calculation process, each word of the text is evaluated sequentially for its TTR. For example, . . . *of* (1.00) *the* (1.00) *people* (1.00) *by* (1.00) *the* (.800) *people* (.667) *for* (.714) *the* (.625) *people* (.556) . . . and so forth. However, when the default TTR factor size value (here, .720) is reached, the factor count increases by a value of 1, and the TTR evaluations are reset. Thus, given the previous example, MTLD would execute . . . *of* (1.00) *the* (1.00) *people* (1.00) *by* (1.00) *the* (.800) *people* (.667) |||FACTORS = FACTORS + 1||| *for* (1.00) *the* (1.00) *people* (1.00) . . . and so forth.

### Partial Factors

A partial factor value is calculated for the lexical remainders of a text (i.e., the final words that do not form a full factor). For example, a TTR of .887 forms 40.4% of the range between 1.00 and the full factor of .720. If a text contains 4 full factors and a remainder that has a TTR of .887, then the final factor count is  $4.00 + 0.404 = 4.404$ .

# APPENDIX G

## Focus group

In consultation with a qualitative researcher from the department of linguistics at Ghent University (J. Declercq, personal communication, 12 February 2019), I decided to first offer a general prompt (*How do you feel about writing?*) to generate spontaneous input followed by more specific sub-prompts (*Do you have specific writing issues being multilingual?*). In order to make the stimulus material engaging, as suggested by Barbour (2007), I made a PowerPoint which was meant to be both a helpful structuring device and visually appealing.



# APPENDIX H

## Think-aloud protocols

Developed in the field of cognitive psychology by Ericsson and Simon (1984), think-aloud protocols have obtained their place in the language researcher's toolbox. Their use is not uncontested, however, as asking a participant to verbalize their thoughts while performing a writing task increases the cognitive load, potentially using up all available cognitive resources (Jääskeläinen 2010). Van den Haec et al. (2003) found this can have a negative effect on task performance and Jääskeläinen 2010 suggests that "think-aloud may change the structure of the cognitive processes involved in translating, but how and to which extent, is still unclear". Despite these caveats, I did decide to try to use the think-aloud protocol to elicit data on strategy use because of the following reasons:

- Charters (2003) considers tasks which are inherently verbal in nature – as is the case for writing – most likely to generate accurate data;
- it has been used extensively in L2 writing strategy research (Hyland 2011, Bukta 2014); Graham (2011: 9) provides an overview of studies using think-aloud to examine strategy use;
- in a study of the effects of thinking aloud while writing an argumentative piece with Chinese EFL learners, Yang, Hu, & Zhang. (2014) find no reactivity<sup>15</sup> on most measures, although verbalizing metacognitive thoughts did prolong time on task

For the practical organisation of the think-aloud protocol, I followed the guidelines by Fonteyn et al. (1993) and Charters (2003). First, a written protocol was drafted to make sure the research could be conducted in an orderly fashion. This included the instructions to the pupil and suggestions for

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<sup>15</sup> effect of the research method on performance

what questions to ask. These were kept to a minimum to avoid intrusion and consisted of "What are you thinking about?" and "Tell me more.". For the actual think-aloud administration, I selected a quiet room and sat next to the pupil rather than across from her to minimize potential intimidation. The originally allocated time for the task was 25 minutes, but I decided to extend this time by 10 minutes (approx. 30%) because of the finding from Yang, Hu, & Zhang (2014) that metacognitive thinking-aloud increases time on task and with Krings (2001) and Jakobsen (2003) estimating this increase to be about 30% and 25% respectively in their research on think-aloud in translation studies.

# APPENDIX I

## Coding sheet strategy use

Two strategies were found not applicable because pupils did not have the same resources and opportunities under test conditions (e.g. *I seek feedback from a native speaker.*). Further, two items that specified thinking in the target language or the mother tongue (e.g. *When generating ideas, I write down ideas that come to mind in English.*) were converted into a language independent item, as pupils indicated they switched freely to the extent they could not clearly delineate their language use, in line with Ellis & Yuan's description of the role of L1 in L2 composition as "a resource that learners draw on variably" (2004: 64). This interaction with Alexandra is a good example of this:

*How come you were thinking in French at that moment?*

*No idea, I started off in Dutch "Sommige leerkrachten..." and then I was speaking French in my head and yeah, ... I was wondering how to translate that to Dutch and then I found it.*

Three items were adapted to be broader or more specific, to align with the way pupils would report them. For instance, the item *To clarify the purpose of the writing, I identify the expected readers.* consists of both a reflection on the goal of the text and its intended audience. Both Alexandra and Jean-Paul indicated the importance of "putting oneself in the skin of someone else [i.e. someone else's shoes]" and how this thinking about their expected readers would influence not only their content or writing goal but also their choice of words. Conversely, the data showed that pupils also reflected on the cogency of their argument -and hence its persuasive purpose- from the perspective of logics without thinking about their target audience. Accordingly, this item was disentangled into two items: *"I reflect on my target audience."* and *"I reflect on my communicative purpose."* Finally, the items on revision were not attuned to how pupils phrased their revising behaviour as they would not always

mention at what stage and with what focus they were revising. To accommodate this, revision was recoded as outlined in the table below.

Activity	Level	Focus
revision	sentence/paragraph	spelling
	text as a whole	grammar
	unspecified	style/vocabulary
		content
		structure
		unspecified

# APPENDIX J

Fons



*Oproep*

## Schrijfonderwijs:

### GOOD PRACTICES GEZOCHT!

*Over de auteur*

#### ADRIAAN D'HAENS

geeft Nederlands op een Nederlandstalige school in Brussel en op de Europese School in Oxford. Daarnaast geeft hij Economisch Nederlands voor Anderstaligen op de Universiteit Gent. Als *practitioner researcher* doet hij momenteel onderzoek naar efficiënte schrijfvaardigheidsremediëring in het kader van een masterscriptie aan de universiteit van Oxford.

We konden het recent nog in de krant lezen: studenten kunnen niet (meer) schrijven. Of dat daadwerkelijk zo is, laat ik in het midden; zeker is wel dat schrijven voor zowel leerlingen als leerkrachten vaak reden tot hoofdbrekens is. Leerlingen vinden het moeilijk om helder en correct te formuleren, leerkrachten zuchten onder de grote verbeterlast. Ik ontwerp momenteel een remediëringsprogramma dat focust op schrijfstrategieën en taalgericht vakonderwijs in een context van collaboratief computerondersteund schrijven. Hieronder volgen alvast enkele ideeën ter inspiratie. **Adriaan D'Haens**

#### 1. LAAT LEERLINGEN COLLABORATIEF SCHRIJVEN

Door met z'n tweeën aan een tekst te werken, moeten ze voortdurend uitleggen wat ze bedoelen. Zo leren ze publieksbewust schrijven.

#### 2. GEEF DEELDEADLINES

Zet het schrijfproces centraal door leerlingen hun brainstorm, bouwplan, eerste en tweede versie mee te laten brengen. Laat hen hun werk vooraf uploaden, kies enkele teksten uit en geef er (geanonimiseerd) klassikaal commentaar op.

#### 3. PROBEER EENS GOOGLE DOCS

Dankzij Google Docs kan je het schrijfproces van elke leerling live meevolgen. Je kan enkele interessante kwesties projecteren en met de klas bespreken.

#### 4. MAAK VOORUITGANG VISUEEL

Laat leerlingen een grafiek bijhouden van het aantal woorden en fouten of het cijfer van opeenvolgende schrijftaken of versies. Dat motiveert hen om positief te evolueren.

#### 5. WEES EXPLICIET

Teksten laten lezen om de structuur uit af te leiden en strategieën hanteren: het zijn nuttige technieken, op voorwaarde dat je deze kennis expliciet benoemt. Werk aan metakennis en schrijf structuren en strategieën op.

#### 6. WERK IN STAPJES

Doe voor hoe jij een tekst schrijft aan de hand van de strategieën uit stap 5, door hardop na te denken. Ondersteun leerlingen daarna met een geschreven neerslag van de strategieën en structuren. Neem die leidraad vervolgens stapsgewijs weg: leerlingen kunnen hem eerst thuis en in de klas gebruiken, ver-

volgens alleen nog bij de schrijfvoorbereiding thuis, en ten slotte niet meer. Ze leggen het schrijfexamen dan volledig op eigen houtje af.

### *Jouw tip?*

Om mijn aanpak te verrijken, ben ik benieuwd naar *best practices* van vakcollega's. Ben jij tevreden over je aanpak van schrijfvaardigheid? Heb je goede technieken om leerlingen beter te leren schrijven? Welke strategieën geef jij leerlingen mee, en hoe verwoord je ze precies? Ik ben razend benieuwd naar je input! Als wederdienst maak ik mijn uiteindelijke methode digitaal beschikbaar en hou ik je op de hoogte via *Fons*. Mail me op [adriaan.dhaens@education.ox.ac.uk](mailto:adriaan.dhaens@education.ox.ac.uk).